

MEDICAL TIMES

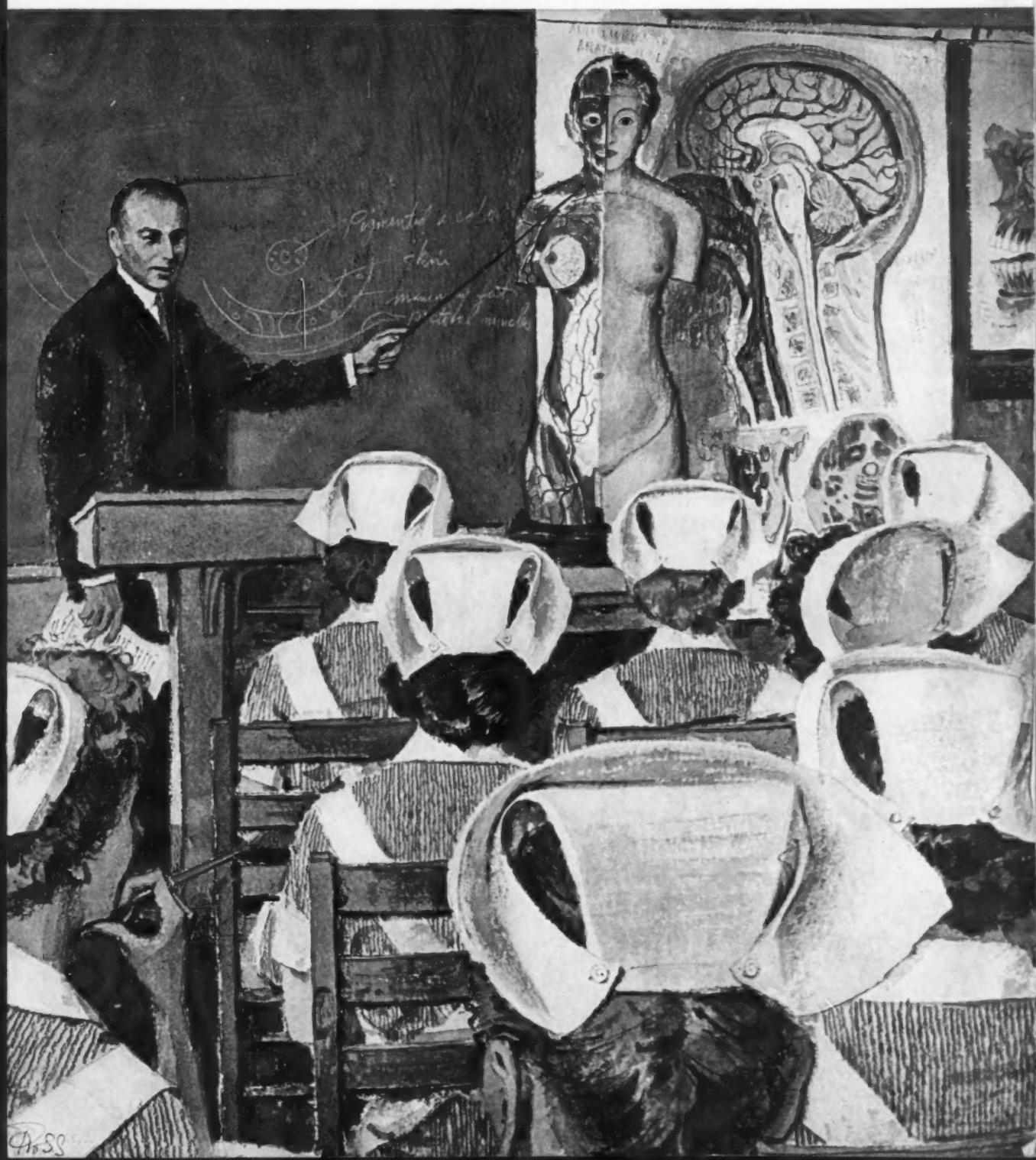
Journal for the Family Physician

November, 1961

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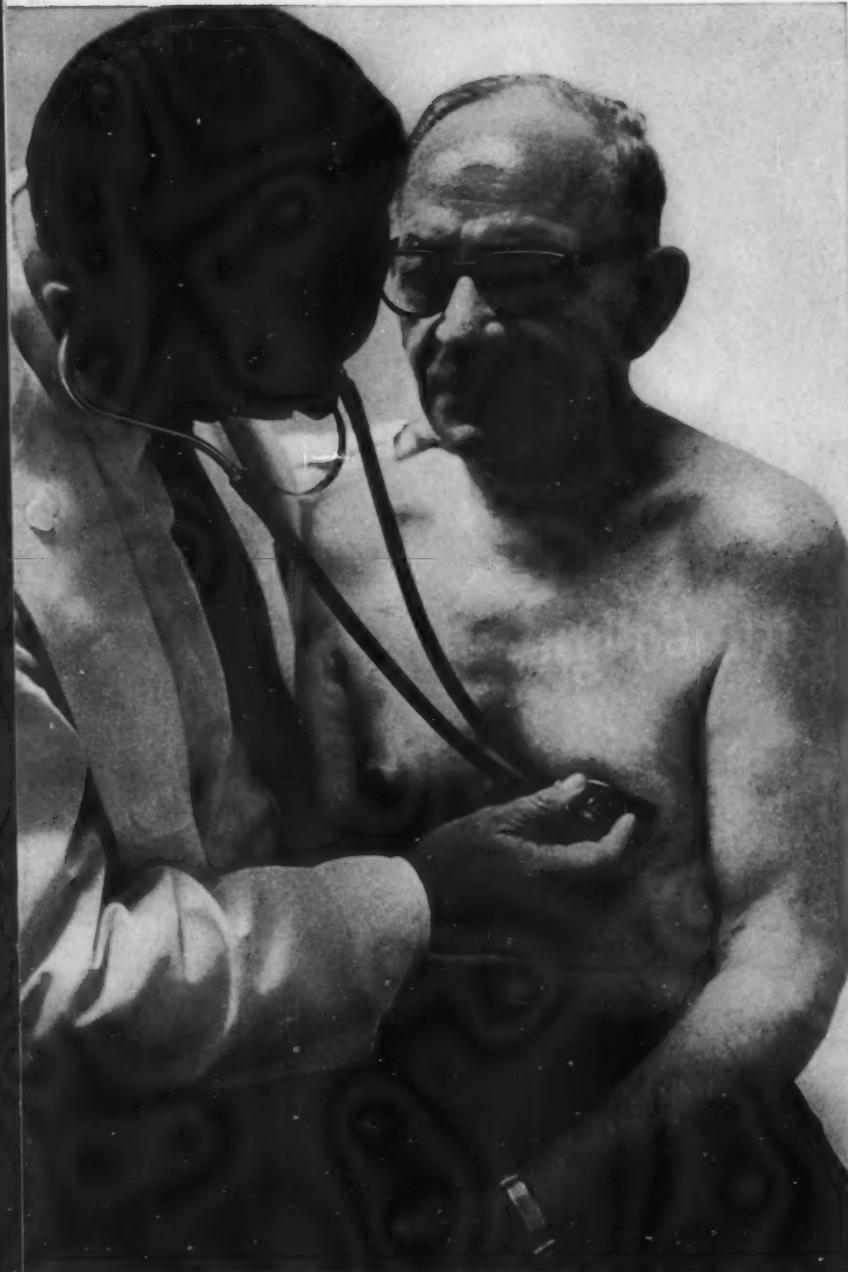
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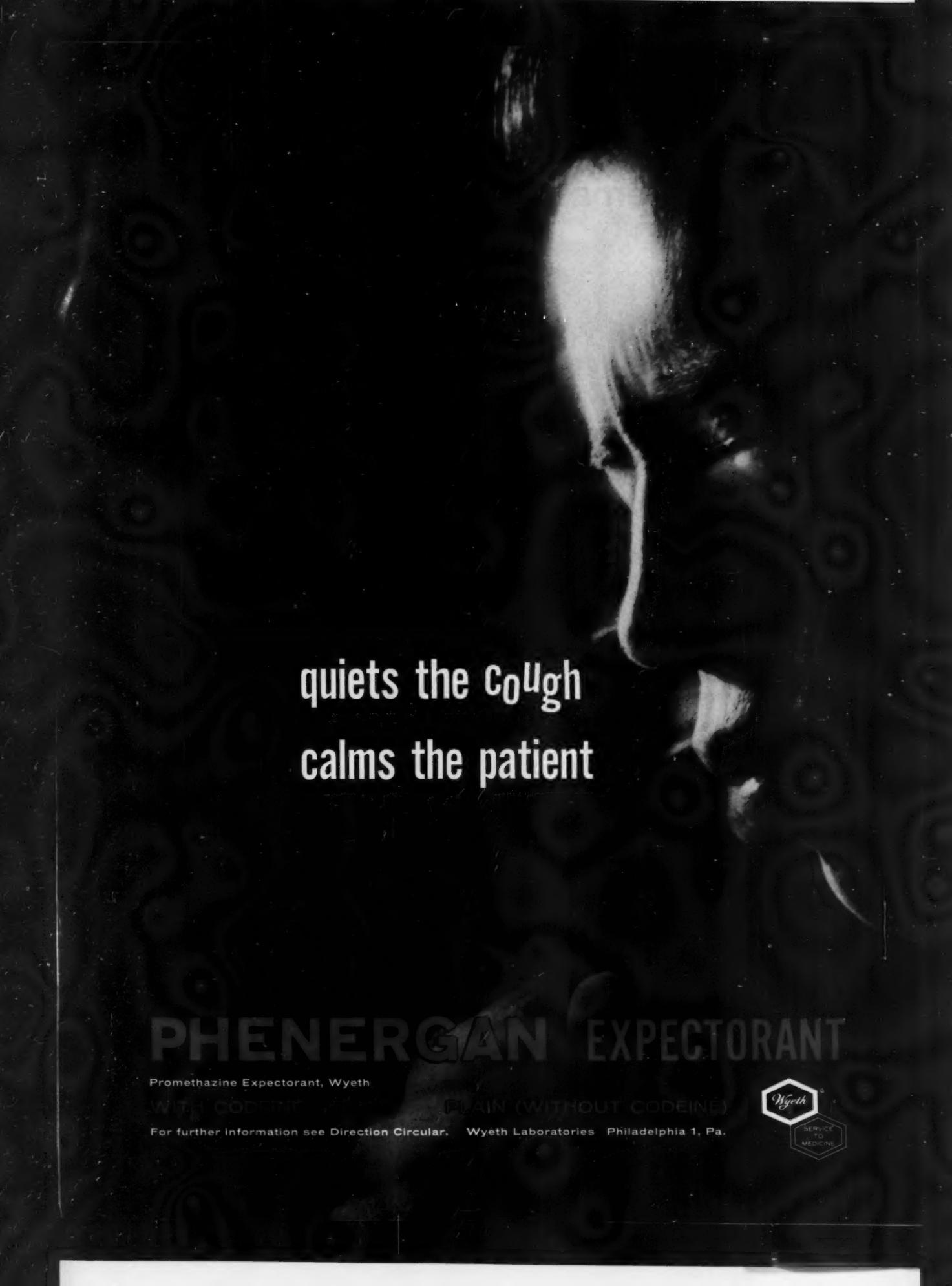
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*Paul, W. D.: Rehabilitation in Rheumatoid Arthritis, South. M. J. 53:492 (April) 1960.



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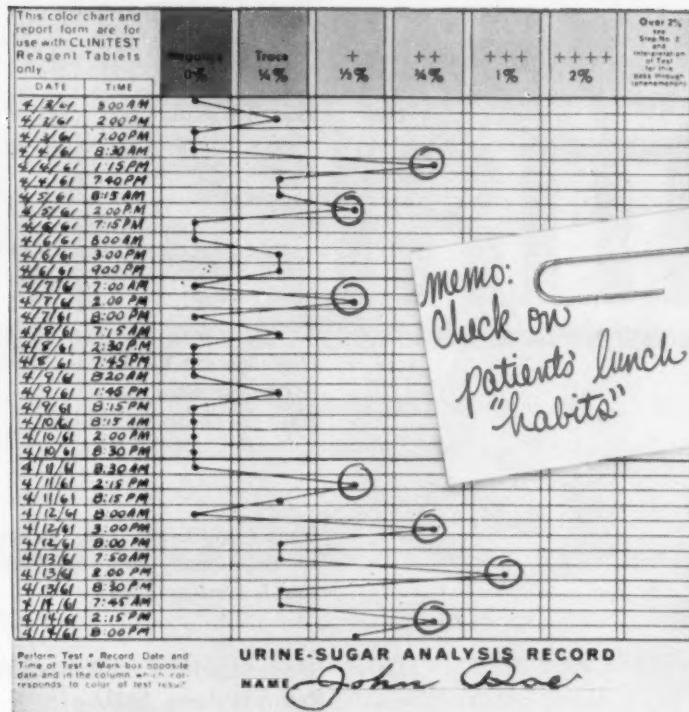
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A doctor can be everything to all men: medical advisor, spiritual counsellor, yes, to some, even an income tax deduction. Our cover this month, however, is dedicated to the doctor in a little known role—that of teacher. More specifically, our "cover doctor", Dr. Marvin Chernow, Assistant Director of Laboratories at Norwalk Hospital, Norwalk, Conn., is pleasantly engaged in giving a lesson in pathology of the female breast to a classroom full of student nurses. "Am I like that?" the nurse in the foreground seems to be wondering. To our cover artist, Alex Ross, this wasn't a class in pathology but, rather, a dream come true. "I never had so many models pose for me before at one time," he'll tell you gleefully, "—and all of them for free!"

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1. Cornely, D. A., and Ritter, J. A.: N-acetyl-p-aminophenol (Tylenol Elixir) as a Pediatric Antipyretic-Analgesic, *J.A.M.A.* 160:1219-1221 (April 7) 1955.

2. Mintz, A. A.: Management of the Febrile Child, *J. Ky. Acad. Gen. Pract.* 5:28-31 (January) 1959.

MEDICAL TIMES



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The following index contains all the products advertised in this issue. Each product has been listed under the heading describing its major function. By referring to the pages listed, the reader can obtain more information. All of the products listed are registered trademarks, except those with an asterisk (*).

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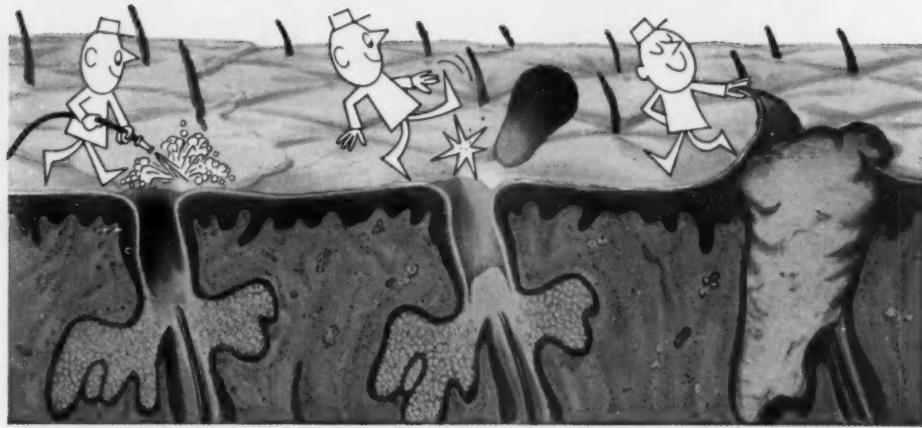
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relieves agitation, apprehension, anxiety**

**and "screens out"
certain side effects
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PHOTOSENSITIVITY

"The aim of current chemical, pharmacological, and clinical investigations of the phenothiazines is to find derivatives possessing potent and selective tranquilization with a minimum of toxic action.... In agreement with the published results of other investigators, we believe that thioridazine [Mellaril] shows a greater specificity of tranquilizing action and freedom from serious toxic effects when compared with some of the other phenothiazines."¹

In the Menopause: A series of 150 menopausal patients were observed during Thioridazine (Mellaril) therapy for two years. Most patients had multiple complaints; the chief ones listed: tension, insomnia, depression, fatigue and lethargy, irritability, chills, hot flashes and night sweats. The author states "The results were extremely good in those patients whose chief complaint was that of insomnia, tension, nervousness and, in general, the large group of menopausal symptoms that are due to disturbances of the psyche. The sense of 'well being' afforded these patients definitely decreased the intensity of 'hot flashes' and night sweats.... Eighty-five per cent of patients complaining of insomnia, nervousness and irritability received excellent relief."²

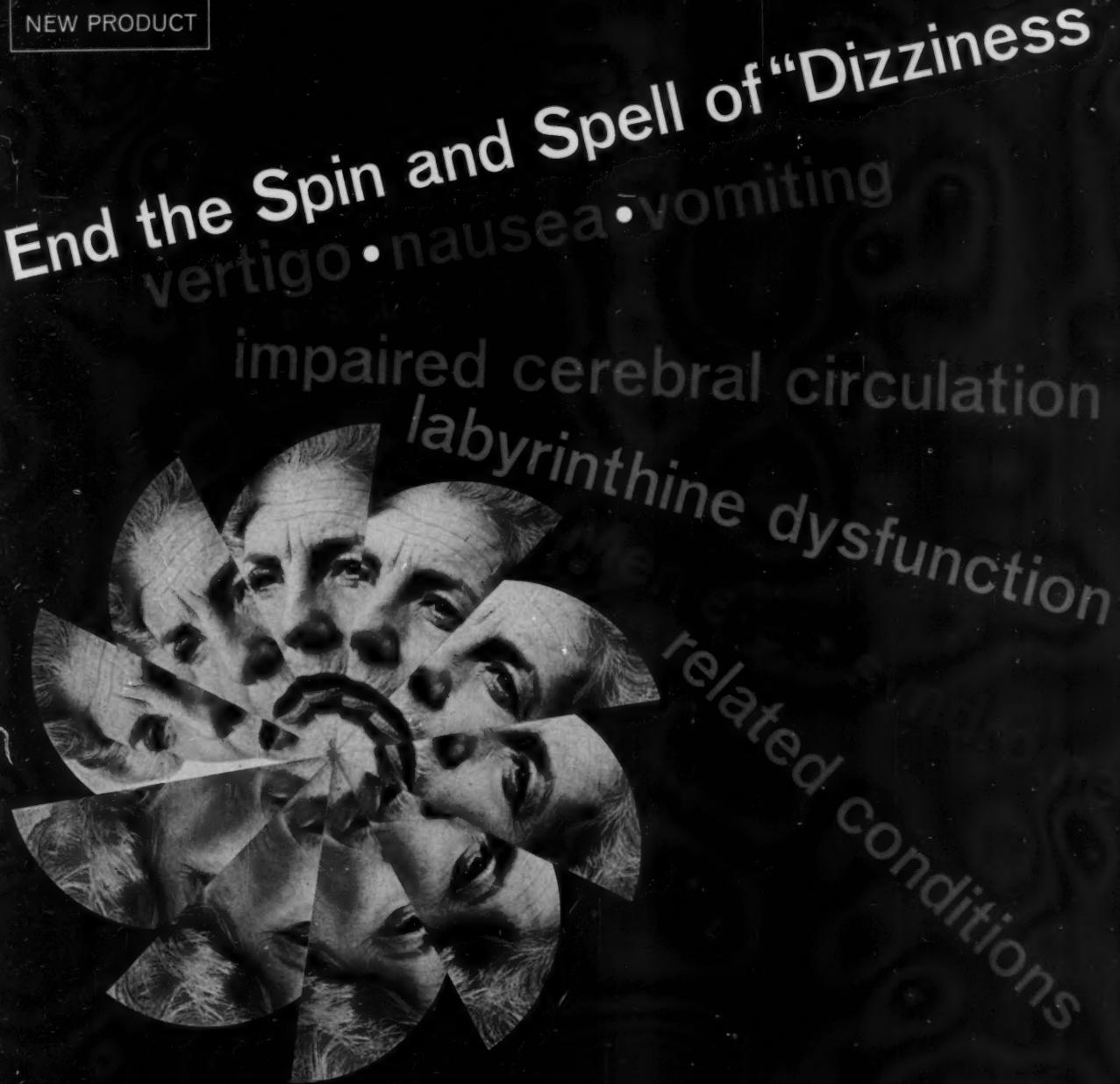
Mellaril is indicated for varying degrees of agitation, apprehension, and anxiety in both ambulatory and hospitalized patients.

Usual starting dose: Non-psychotic patients - 10 or 25 mg. t.i.d.; Psychotic patients - 100 mg. t.i.d. Dosage must be individually adjusted until optimal response. Maximum recommended dosage: 800 mg. daily. Supply: Mellaril Tablets, 10 mg., 25 mg., 50 mg., 100 mg.

1. David, N. A., Logan, N. D., and Porter, G. A.: Evaluation of Thioridazine (Mellaril), a new phenothiazine, In the hospitalized patient, A.M. & C.T. 7:364, June 1960. 2. Caldwell, W. G.: Emotional Disorders in the Menopause and Treatment with Thioridazine, presented at Bahamas Conference on Internal Medicine, Nassau, Bahamas, April 30-May 6, 1961.



NEW PRODUCT



• **TWO SPECIFIC ACTIONS • FEWER SIDE REACTIONS** New Tigacol facilitates the symptomatic control of vertigo. It relieves the varied symptoms of vertigo whether due to labyrinthitis, Meniere's syndrome, impaired cerebral circulation or of nonspecific origin. Tigacol offers you the clinically proven advantages of a well-tolerated peripheral vasodilator and a new specific antiemetic. Roniacol promptly relieves vertigo by directly relaxing the peripheral blood vessels without causing severe flushing or hypotension. Tigan controls nausea and vomiting by selective suppression of emetic impulses without drowsiness, tranquilization or adrenergic effects.

AVAILABLE: Pink capsules, each providing 50 mg Roniacol in the form of the tartrate and 100 mg Tigan HCl, bottles of 50. **USUAL ADULT DOSAGE:** One or two capsules three times daily. **NOTE:** Side effects were virtually absent except for a few instances of flushing and an occasional case of skin rash, which disappeared when medication was withdrawn. There are no known contraindications, but as with any new drug, patients should be observed periodically while on Tigacol therapy.

RONIACOL® — brand of nicotinyl alcohol • TIGAN® — 4-(2-dimethylaminoethoxy)-N-(3,4,5-trimethoxybenzoyl)benzylamine

TIGACOL

when the complaint is "dizziness"

• ROCHE LABORATORIES • Division of Hoffmann-La Roche Inc • Nutley 10, New Jersey



Off the Record...

Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported sculptelite figurine . . . an amusing caricature of a physician . . . will be sent in appreciation for each accepted contribution.

Thanks for the Compliment

I recently ushered in a very young bride, who had returned from her honeymoon with a rather profuse leucorrhea. I explained that this was not too unusual for recently married women, that the mucosa and cervix were unaccustomed to the bacteria encountered during relations with her husband, etc. "In short," I said, "you have acute vaginitis."

At this she blushed, dropped her eyes, and said, "Thank you, Doctor, my husband thinks it's cute, too!" Whereupon, I retired hurriedly from the room to hide my own amusement and embarrassment!

E. O. M., M.D.
Indianapolis, Ind.

Off With His Head!

Patients frequently try to show their crudity in discussing their symptoms with physicians. I will never forget the patient who said, "I awoke this morning with this pain in my neck. It hurts but does not decapitate me."

S. D., M.D.
Floral Park, N. Y.

A Day of Rest

An obese lady had delivered her seventh child, had her postpartum checkup at which time she was fitted for a diaphragm and instructed in its use and had now returned, after only a few months, to the prenatal clinic. She was then quizzed about the diaphragm and its

use and she answered that she had used it all the time and in the proper manner. In a final attempt to decide whether this was a true failure or improper use she was asked, "Are you sure you didn't forget to use it once?" To which she replied, "Oh Doctor, I can't use that on Sunday."

G. A. K., M.D.
Des Moines, Ia.

Orifice Hours

I drove past an Ob-Gyn man's sign downtown yesterday and the comedy of errors was self-explanatory . . .

JOHN SMITH, M.D.
OBSTETRICS-GYNECOLOGY
ORIFICE HOURS
1-3 6-8
EXCEPT WED. AND SAT.
M. J. C., M.D.
Oaks, Pennsylvania

Muffled

The 232-pound truck driver passed the health examination satisfactorily, but his wife was concerned with his headaches, frequent dizziness, and chronically reddened facies. I assured him he was in good health and attributed his symptoms and rubra physiognomy to his obesity. He was given a low-calorie diet and an appetite depressant.

Weeks later he returned to my office, very
Concluded on page 29a

in
CARDIAC
EDEMA PHYSICIANS
DIURIL®
CHLOROTHIAZIDE

more often than any other diuretic

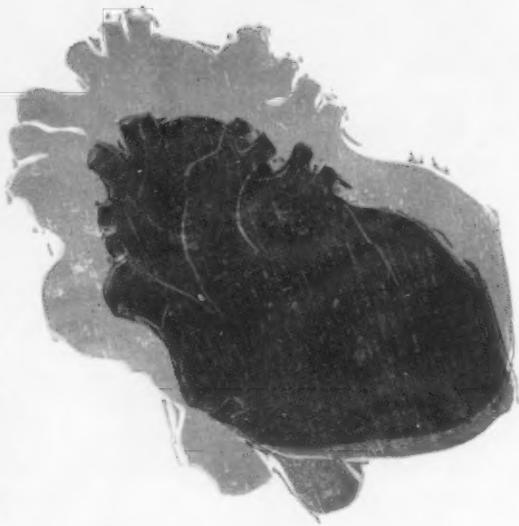
"The diuretic effect of this drug has been reported in nearly 500 cases of congestive heart failure. In approximately 86 per cent of the cases, 1 to 2 Gm. per day of chlorothiazide produced a satisfactory diuresis. (Loss of weight averaged 5 to 6 pounds in 24 hours.)" "One group of investigators found that chlorothiazide improved the status of patients in congestive heart failure to such an extent that digitalis could be discontinued. Other authors have shown also that digitalis could be safely discontinued in selected cases of congestive heart failure in which there was a regular sinus rhythm."

Edson, J.N., and Schluger, J.: Amer. Heart Jl. 60:647, 648, October, 1960.

Supplied: 250-mg. and 500-mg. scored tablets DIURIL chlorothiazide in bottles of 100 and 1000. Before prescribing or administering DIURIL, the physician should consult the detailed information on use accompanying the package or available on request. DIURIL is a trademark of Merck & Co., Inc.



MERCK SHARP & DOHME
Division of Merck & Co., Inc. West Point, Pa.



ANY INDICATION FOR DIURESIS IS AN INDICATION FOR DIURIL



**for the first time
adequate iron
in convenient
sustained-release
form for more
efficient assimilation**



Mol-Iron® Chronosules™

sustained-release capsules

for improved treatment of iron-deficiency anemia

Each Mol-Iron Chronosule contains the equivalent of 80 mg. elemental iron. Gradual dosage release means greater patient tolerance — minimizing G.I. disorders. Marked increases in hemoglobin and hematocrit levels through sustained liberation of more absorbable Mol-Iron. All the advantages of specially processed Mol-Iron — now in the form most conducive to efficient assimilation.

Dosage: Adults — one Mol-Iron Chronosule daily.

In severe anemia, one Chronosule twice daily.

Children — one Mol-Iron Chronosule daily.

Supplied: Bottles of 30 Chronosules.

Complete information concerning the use of this drug is available on request.

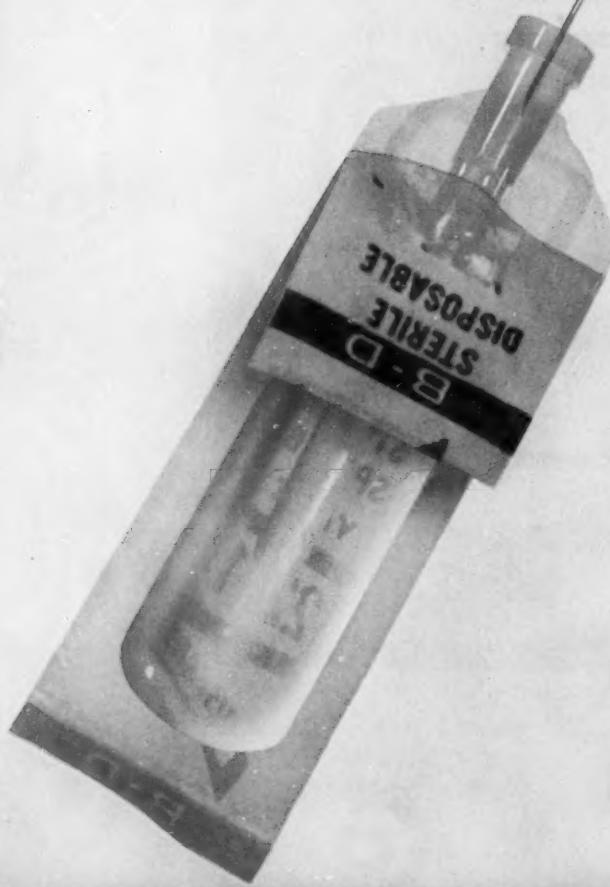


WHITE LABORATORIES, INC., Kenilworth, New Jersey

B-D MULTIFIT

Interchangeable Syringe
cuts breakage, replacement costs
and assembly time—every plunger
fits every clear glass barrel

FOR GREATER ECONOMY...MAXIMUM SAFETY

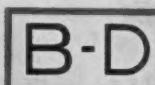


B-D YALE

Sterile Disposable Needle

provides greater safety through
new design features—sharper
points, tamper-proof packages,
protective sheaths, sure-grasp hubs

a B-D  product



**TECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY**

B-D, YALE, DISCARDIT and MULTIFIT are trademarks

80360

Off the Record...

Concluded from page 25a

cheerful that his headaches and dizziness had disappeared. Surprisingly, the red hue of his face was also gone, and I cautiously queried him about his dramatic change. "Oh, Doc," he announced, "my brother-in-law fixed all that. He changed a leaky muffler in my truck and I have been fine ever since."

P. L. J., M.D.
Lakeland, Florida

The Wisdom of Age

The day after our dietitian had instructed a sweet elderly spinster, who was just nicely recovering from cardiac decompensation, and on a one gram sodium diet, she asked me this question: "Doctor, have you ever eaten an egg without salt?" I had to confess I hadn't. To my reply she smiled and added: "Well, doctor, you should know, an egg without salt is like a kiss without love."

F. B. W., M.D.
Nashua, N. H.

Too Cold for Comfort

One cold winter day while performing a pelvic examination on a dignified regular patient of mine, my assistant handed me a vaginal speculum that was on a tray by the window. When inserting the speculum, the patient exclaimed, "My God, that's the coldest thing you've ever put in me!"

We all blushed, patient, nurse and doctor.

A. F. R., M.D.
Canfield, Ohio

Embarrassing Predicament

A child was brought into my office with a temperature elevation and upper respiratory infection.

After a thorough examination I wrote a prescription for an antibiotic and gave the mother careful instructions as to care of the child, dosage, etc.

The next day I received an irate call from

the mother with the belligerent complaint that her child was no better. As soon as I could break into her tirade, I asked how much of the medication the child had taken. There was a long, embarrassed pause at the other end of the line, and then this sheepish reply, "Gosh, Doc, I was so worried about my little girl, I forgot to have the prescription filled!"

B. S. A., M.D.
Oak Park, Mich.

That Positive Feeling

The receptionist ushered a frail, little, old, stooped farm lady into my examining room. She was wearing a long black dress; a black knitted shawl over her head and shoulders and a large gold brooch at her neck.

The nurse was asked to gown her for examination and I left the room. Shortly the nurse came into my office and informed me that the little old lady refused to undress and be seen by a man in "that gown."

After a great deal of persuasion she finally donned the gown and the examination proceeded. When I had almost finished and was examining her rectum, she began to scream in a loud shrill voice, "It's a comin'—it's a comin'—Oh, Lord! the manure is a comin'."

M. J. W., M.D.
Jefferson City, Mo.

Undecided

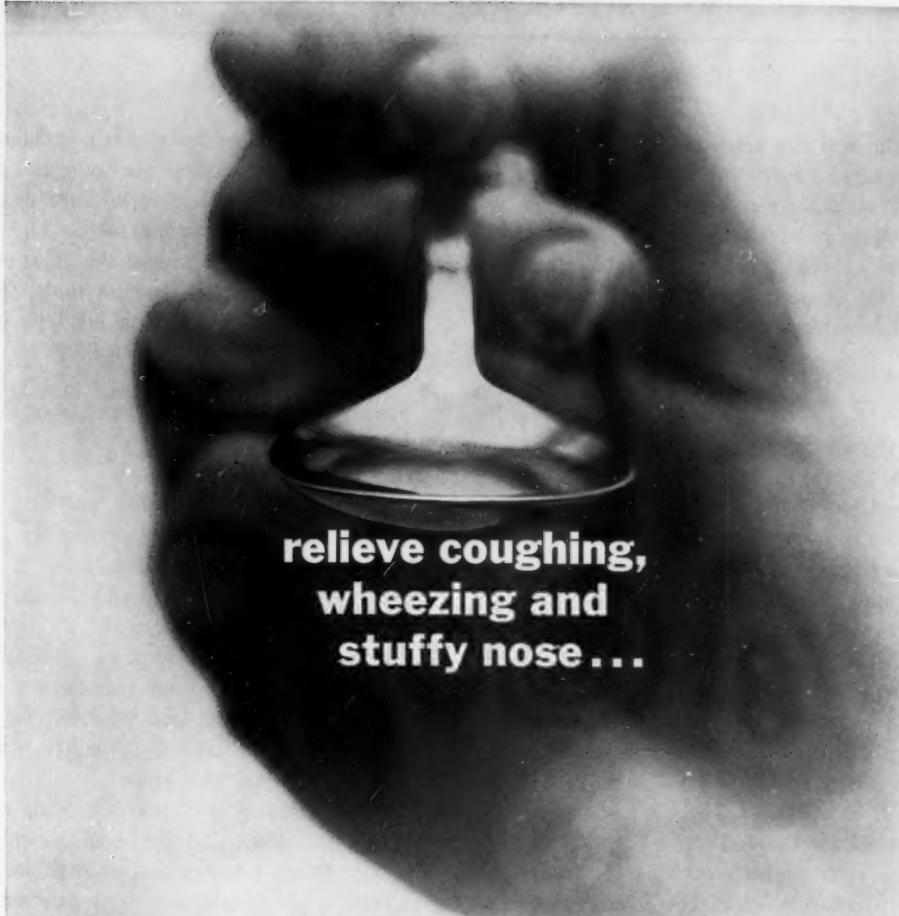
An intern was taking a patient up in the elevator when she suddenly exclaimed, "Oh, Doctor, I'm going to vomit!"

The intern stopped the elevator and quickly ran in search of an emesis basin.

When he returned, the patient cried, "Oh, hurry, I've got to pass my water."

The intern looked down at her and said, "Well, make up your mind, lady. It makes a difference where I put this pan."

L. S. E., M.D.
Twentynine Palms, Calif.



**relieve coughing,
wheezing and
stuffy nose...**

with NEW
'ACTIFED-C' EXPECTORANT
brand

ANTITUSSIVE • EXPECTORANT • BRONCHODILATOR • DECONGESTANT • ANTIHISTAMINIC

The etiology of cough is such that drug therapy designed to produce relief may be called upon to provide several therapeutic actions simultaneously. The ingredients of 'Actifed-C' Expectorant were selected because they produce desirable antitussive, expectorant, bronchodilator, decongestant and antihistaminic effects.

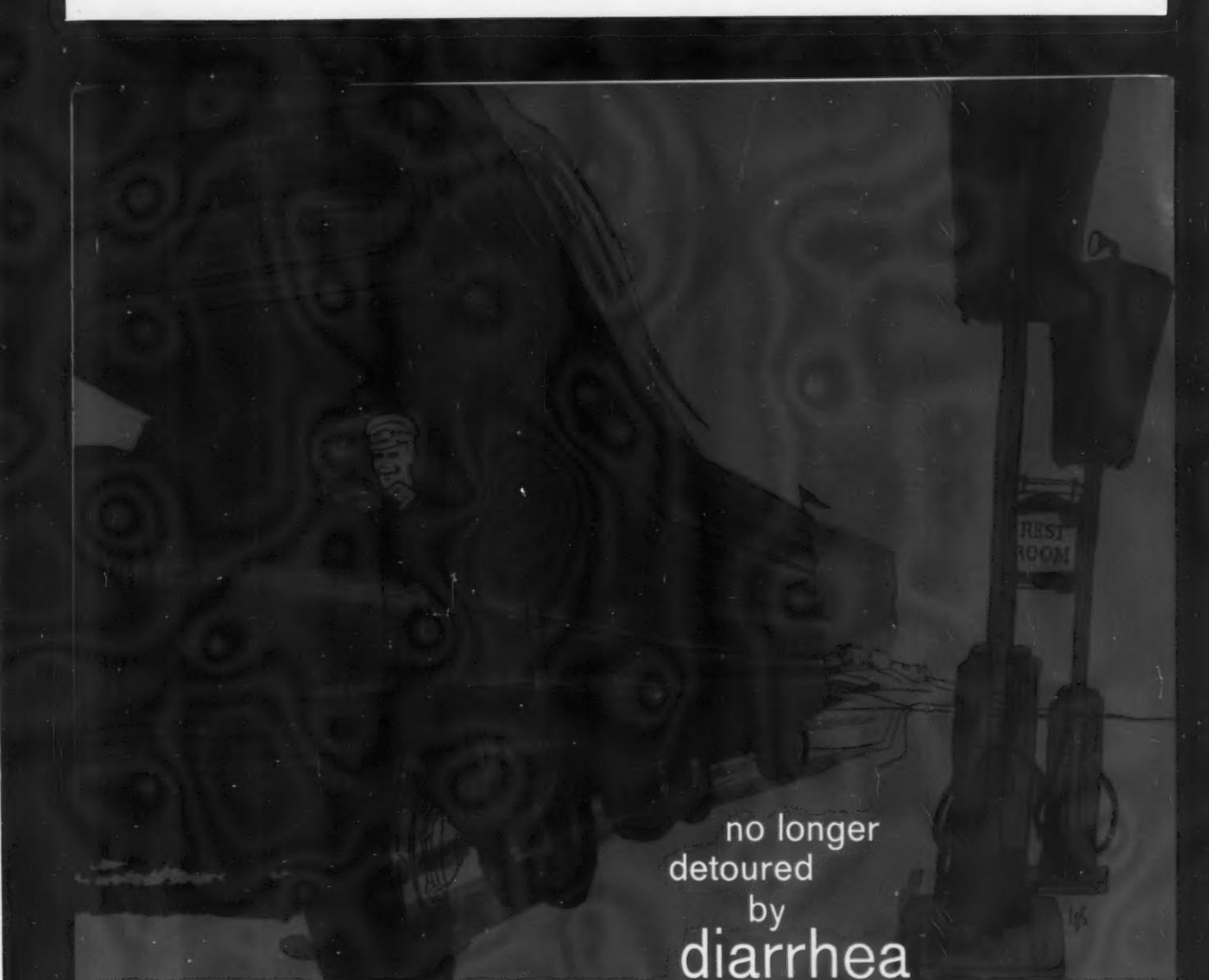
Each 5 cc. teaspoonful contains:
'Actidil'® brand Triprolidine Hydrochloride 2 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride 30 mg.
Codeine Phosphate 10 mg.
Glyceryl Guaiacolate 100 mg.

Dosage: Adults and children over 12 years — 2 tsp., 4 times daily. Children 6 to 12 years—1 tsp., 4 times daily. Infants and children up to 6 years—1/2 tsp., 4 times daily.

Precaution: Although pseudoephedrine hydrochloride causes virtually no pressor effect in normotensive patients, it should be used with caution in patients with hypertension. In addition, even though triprolidine hydrochloride produces only a low incidence of drowsiness, appropriate precautions should be observed.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



no longer
detoured
by
diarrhea

DONNAGEL®



Donnatal® with Kaolin and Pectin compound

DONNAGEL's comprehensive antidiarrheal formulation gives the green light to normal activity, through its fast and dependable control of intestinal hypermotility.

Each 30 cc. (1 fl. oz.) of DONNAGEL contains:

Kaolin	6.0 Gm.	Natural belladonna alkaloids:
Pectin	142.8 mg.	hyoscyamine sulfate 0.1037 mg.
Phenobarbital (1/4 gr.)	16.2 mg.	atropine sulfate 0.0194 mg. hyoscine hydrobromide 0.0065 mg.

also available

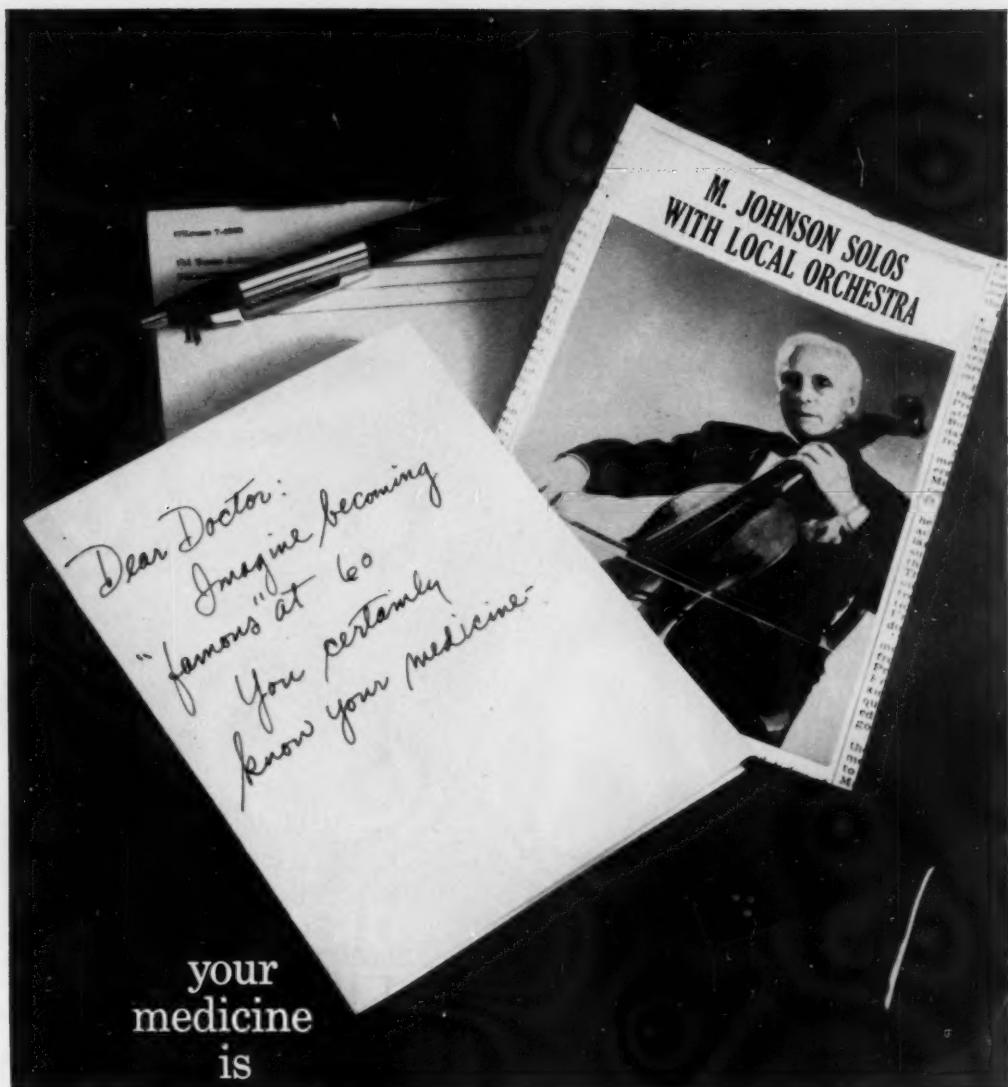
DONNAGEL® WITH NEOMYCIN • DONNAGEL-PG

DONNAGEL plus neomycin sulfate 300 mg. (as neomycin base 210 mg.) per 30 cc.

DONNAGEL plus powdered opium U.S.P. 24.0 mg. per fl. oz. (equivalent to paregoric 6 ml.). This is the usual adult dose.

All three forms available in bottles of 6 fl. oz.

A. H. ROBINS COMPANY INC. RICHMOND 20, VIRGINIA



GEVRESTIN®

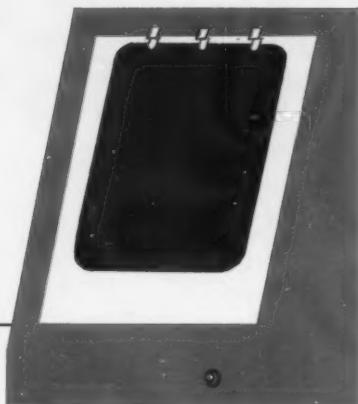
Geriatric Vitamins—Minerals—Hormones—d-Amphetamine Lederle

one capsule every morning supplements the diet to help achieve proper balance: ♦ nutritionally ♦ metabolically ♦ mentally

Each dry-filled capsule contains: Ethinyl Estradiol, 0.01 mg. • Methyl Testosterone, 2.5 mg. • d-Amphetamine Sulfate, 2.5 mg. • Vitamin A (Acetate), 5,000 U.S.P. Units • Vitamin D, 500 U.S.P. Units • Vitamin B₁₂ with AUTRINIC® Intrinsic Factor Concentrate, 1/10 N.F. Oral Unit • Thiamine Mononitrate (B₁), 5 mg. • Riboflavin

(B₂), 5 mg. • Niacinamide, 15 mg. • Pyridoxine HCl (B₆), 0.5 mg. • Calcium Pantothenate, 5 mg. • Choline Bitartrate, 25 mg. • Inositol, 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate, 50 mg. • L-Lysine Monohydrochloride, 25 mg. • Vitamin E (Tocopherol Acid Succinate), 10 Int. Units • Rutin, 12.5 mg. • Ferrous Fumarate (Elemental iron, 10 mg.), 30.4 mg. • Iodine (as KI), 0.1 mg. • Calcium (as CaHPO₄), 35 mg. • Phosphorus (as CaHPO₄), 27 mg. • Fluorine (as CaF₂), 0.1 mg. • Copper (as CuO), 1 mg. • Potassium (as K₂SO₄), 5 mg. • Manganese (as MnO₂), 1 mg. • Zinc (as ZnO), 0.5 mg. • Magnesium (MgO), 1 mg. Supply: Bottles of 100 and 1,000.

REQUEST COMPLETE INFORMATION ON INDICATIONS, DOSAGE, PRECAUTIONS AND CONTRAINDICATIONS FROM YOUR LEDERLE REPRESENTATIVE OR WRITE TO MEDICAL ADVISORY DEPARTMENT. LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology
New York University School of Medicine
and Director of Radiology, Bellevue Hospital Center

A seven-year-old Negro female complaining of swelling of the abdomen, weakness and shortness of breath.

What Is Your Diagnosis?

1. Normal
2. Cooley's Anemia
3. Osteogenesis Imperfecta
4. Osteopoikilosis

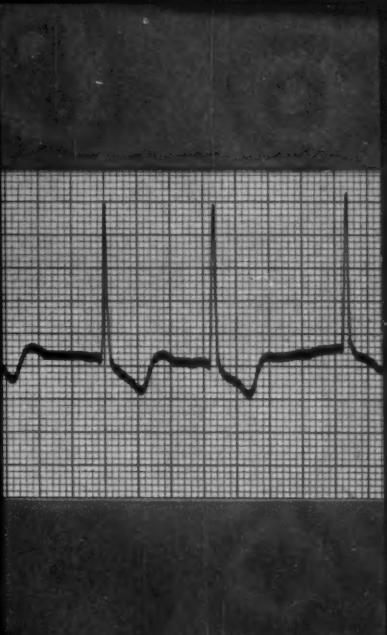
(Answer on page 90a)



*before
treatment**



Cardiac enlargement and pulmonary congestion.



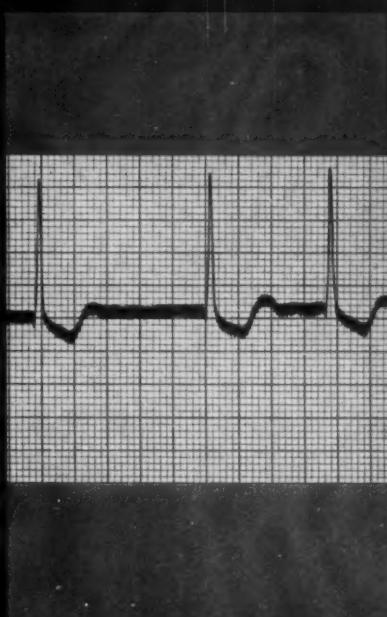
Left ventricular strain and hypertrophy (ST depression in Lead V4).

*after one month
on
HYDROPPRES**

After taking the equivalent of 2 HYDRODIURIL 50 Tablets



Reduction in heart size and clearing of congestion.

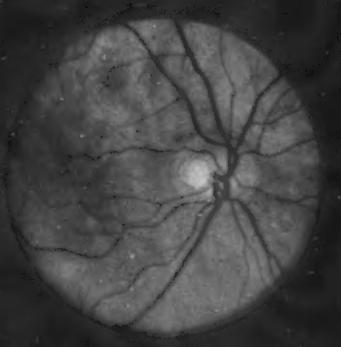


Changes toward normal (less ST depression).

*case report

effective by itself in many hypertensives...
indicated in all degrees of hypertension

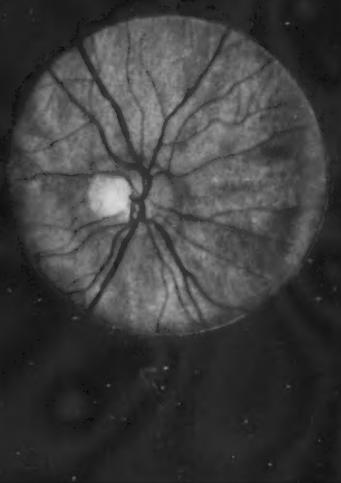
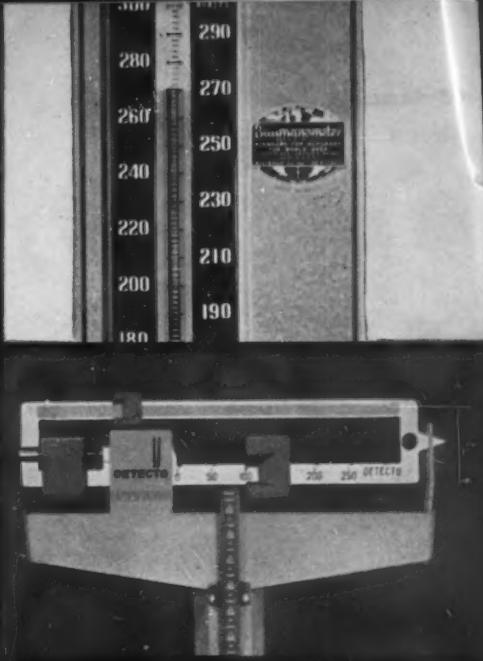
HYDROPPRES.
HydroDIURIL® with RESERPINE
HYDROCHLOROTHIAZIDE



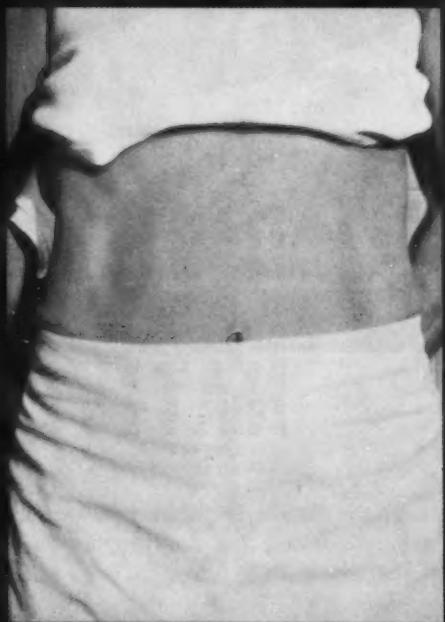
Hypertensive retinopathy
with hemorrhages.



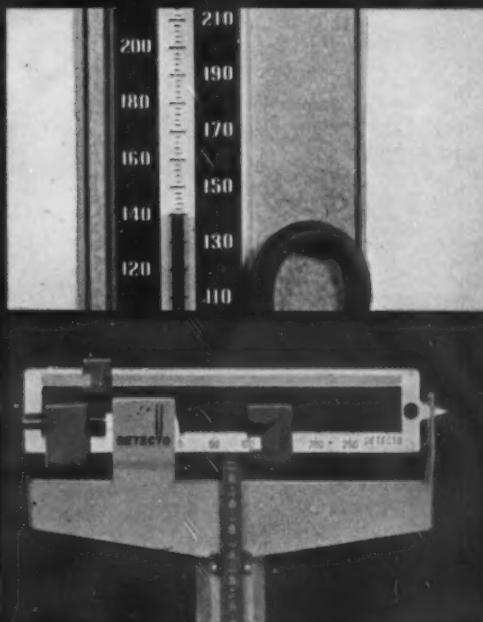
Liver palpable 5 fingerbreadths
below costal margin.



Very little change.



Liver not palpable.



HYDRORES-25

25 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine per tablet. One tablet one to four times a day.

also available:

HYDRORES-Ka[†]-25

25 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine, 572 mg. potassium chloride (equivalent to 300 mg. potassium) per tablet.

It is essential to reduce the dosage of other antihypertensive agents, particularly the ganglion blockers, by at least 50 per cent immediately upon addition of these agents or of HYDRORES Tablets to the regimen.

HYDRORES-50

50 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine per tablet. One tablet one or two times a day.

HYDRORES-Ka[†]-50

50 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine, 572 mg. potassium chloride (equivalent to 300 mg. potassium) per tablet.

Before prescribing or administering HYDRORES, the physician should consult the detailed information on use accompanying the package or available on request.



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[†]HYDRORES, HYDRORES-Ka, AND HYDRODIURIL ARE TRADEMARKS OF MERCK & CO., INC.

no more

therapeutic

peaks

or

valleys

DIGITALINE

the original crystalline digitoxin

NATIVELLE®

You will find that Digitaline Nativelle, the original crystalline digitoxin, provides exactly the balanced, controlled maintenance dose you want for your cardiac patient. Its duration of activity is neither too short nor unduly prolonged, well suited to daily maintenance therapy. Its complete absorption and purity assure uniform potency, precision of dosage, total utilization and effectiveness. A product of Nativelle, Inc.



E. Fougera & Company, Inc., Hicksville, Long Island, N. Y.

after initial digitalization...

a lifetime of balanced

controlled maintenance therapy



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for the infected eye

Furacin®
brand of nitrofurazone
Ophthalmic Liquid / Ointment

- wide-spectrum bactericidal action in conjunctivitis, blepharitis, hordeolum, keratitis, dacrocystitis, corneal ulcers, abrasions, and burns
- nonirritating to delicate ocular tissues ● sensitization rarely develops
- stable, and compatible with other ophthalmic agents

FURACIN Ophthalmic Liquid: nitrofurazone 0.02% in sterile, isotonic aqueous solution; 15 cc. dropper bottle. FURACIN Ophthalmic Ointment: nitrofurazone 1% in a petrolatum base; 3.5 Gm. tube.

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Theragran®

SQUIBB VITAMINS FOR THERAPY

For your patients with infections or other illnesses who need therapeutic vitamin support. Each Theragran supplies the essential vitamins in truly therapeutic amounts:

Vitamin A	25,000 U.S.P. Units
Vitamin D	1,000 U.S.P. Units
Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Vitamin C	200 mg.
Pyridoxine Hydrochloride	5 mg.
Calcium Pantothenate	20 mg.
Vitamin B ₁₂	5 mcg.



Squibb Quality—the Priceless Ingredient

*Theragran® is a Squibb trademark

“nutrition...present as a modifying or complicating factor in nearly every illness or disease state”¹

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

cardiac diseases “Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease.”² 2. Kampmeler, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

arthritis “It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . .”³

3. Fernandez-Herlihy, L: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

digestive diseases Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.⁴ Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.⁵ 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition. National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

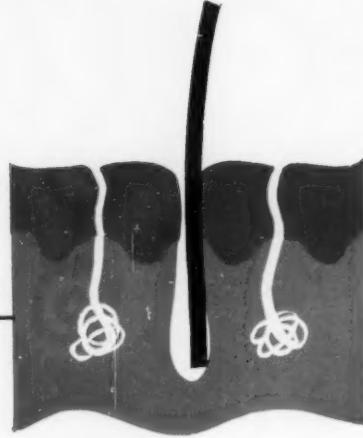
degenerative diseases “Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult.”⁶ 6. Overholser, W., and Fong, T.C.C. In Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

infectious diseases Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.⁷ 7. Goldsmith, G. A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec. 10) 1960.

diabetes Diabetics, like all patients on restricted diets, require an extra source of vitamins.⁸ “Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes.”⁹

8. Duncan, G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

FOR FULL INFORMATION SEE YOUR SQUIBB PRODUCT REFERENCE OR PRODUCT BRIEF.



Diagnosis, Please!

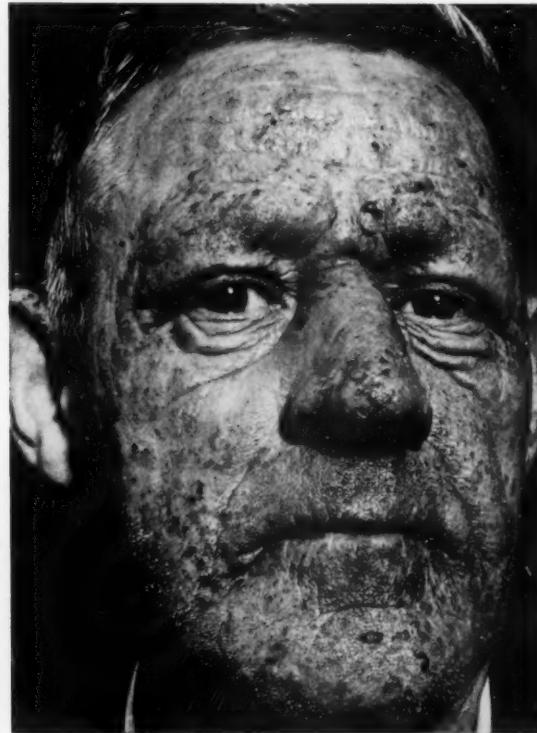
Edited by Rudolf L. Baer, M.D., Professor and Chairman of the Department of Dermatology; Alfred Kopf, M.D., Associate Professor; and Morris Leider, M.D., Associate Professor, New York University School of Medicine.

What Is Your Diagnosis?

1. Angioneurotic Edema due to Penicillin?
2. Ragweed Contact Dermatitis?
3. Dermatomyositis?
4. Polymorphous Light Eruption?

DESCRIPTION: The eruption was 1) limited to the "exposed" areas, 2) flared up seasonally in August and September and 3) cleared after the end of the ragweed pollen season. Patch tests with ragweed oleoresin were strongly positive.

(Answer on page 90a)



Carnalac meets the medical
preference for the
evaporated milk formula...
in a convenient,
ready-prepared form.



Carnalac is Carnation Evaporated Milk with its added Vitamin D, plus carbohydrate. The mother just adds water in the amount you recommend.



"from Contented Cows"

Diluted 1:1, Carnalac provides 2.8% protein, 7.1% carbohydrate, 3.2% fat, 400 I.U. Vitamin D per reconstituted quart, 20 calories per fluid ounce.

For the adjustable formula — proven nutritional value — economical



gassy?

New! For pain, distention and distress due to gastrointestinal gas!

Bloating, belching, borborygmus or flatulence—whatever the symptoms of gastrointestinal gas, Phazyme provides uniquely effective relief. Phazyme is the first comprehensive treatment for gastrointestinal gas that combines both digestive enzymes and gas-releasing agents—dual action that provides far better results than either agent alone. Digestive enzymes minimize gas formation resulting from digestive disorders or food intolerance. The gas-releasing agent, specially activated dimethyl polysiloxane, breaks down gas-enveloping membranes—prevents gas entrapment. A two-phase tablet, Phazyme releases these active

components in the environments best suited to their actions—stomach or small intestine.

Phazyme is ideal medication for relieving gas distress in patients on the currently popular 900-calories-a-day diet. It is also recommended as routine therapy for cardiac patients to prevent gas from aggravating, complicating or simulating angina.

DOSAGE: One tablet with meals and upon retiring, or as required.
SUPPLIED: As two-phase release, pink tablets, in bottles of 50 and 100.



REED & CARNICK / Kenilworth, New Jersey

NEW! When anxiety adds to the gas problem— Phazyme with Phenobarbital

The PHAZYME formula with $\frac{1}{4}$ gr. phenobarbital.
Supplied as two-phase release, yellow tablets, in bottles
of 50. Phenobarbital may be habit forming.

minimizes gas formation
prevents gas entrapment

PHAZYME™

TABLETS

NEW

SPECIAL COUGH FORMULA
for Children

Pediacof

Trademark

SOOTHING DECONGESTANT AND EXPECTORANT

Each teaspoon (5 cc.) contains: Codeine phosphate 5.0 mg.
Neo-Synephrine® hydrochloride . . 2.5 mg.
(brand of phenylephrine hydrochloride)
Chlorpheniramine maleate 0.75 mg.
Potassium iodide 75.0 mg.

**Bright red, pleasant tasting,
raspberry flavored syrup**

Dosage:

Children from 6 months to 1 year,
1/4 teaspoon; 1 to 3 years, 1/2 to
1 teaspoon; 3 to 6 years, 1 to 2
teaspoons; 6 to 12 years, 2 tea-
spoons. Every four to six hours as
needed.

How Supplied:
Bottles of 16 fl. oz.

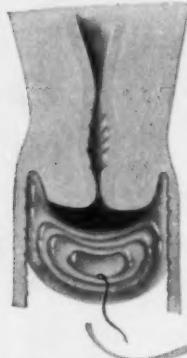
Exempt Narcotic

Winthrop
LABORATORIES
New York 18, N.Y.



"...inhibition of sperm migration is the point of real importance in a contraceptive chemical which is used without a diaphragm."¹

Potent immobilizing and spermicidal action of the unique IMMOLIN matrix.



*TRAPPED
the viable, highly motile sperm becomes non-reproductive the instant it contacts the outer rim of the IMMOLIN Cream-Jel matrix.*



KILLED AND BURIED — the dead sperm is trapped inside the IMMOLIN Cream-Jel matrix.

Immolin® Vaginal Cream-Jel

simple, effective conception control without an occlusive device

Low pregnancy rates obtained¹⁻⁴ with IMMOLIN Vaginal Cream-Jel as sole contraceptive. No failures occurred in 311 patient-months in a clinical study still under way.² Recent digest of four other interim studies (over 1800 patient-months) reports only 3 pregnancies due to product failure.³ Two completed studies (5146 patient-months) reveal the extremely low pregnancy rates of 2.01⁴ and 3.2¹ per hundred woman-years of exposure.

"There has been good [patient] acceptance . . ."² IMMOLIN's dry consistency eliminates the usual complaints of over lubrication. IMMOLIN stays put, won't leak; it is non-messy, snowy-white and completely odorless. These advantages, plus simplicity of application, enhance motivation for consistent use.

Supplied: #900 Package—75 gram tube with improved measured-dose applicator and attractive zippered plastic case.

#905 Package—75 gram tube only.

References: 1. Finkelstein, R., and Goldberg, R. B.: Am. J. Obst. & Gynec. 78:657 (Sept.) 1959. 2. Marcus, S.: J. Am. M. Women's A. 16:383 (May) 1961. 3. Schmid Gynecologic Notes, a digest of interim clinical studies, Vol. 1, No. 1, October, 1960. 4. Goldstein, L. Z.: Obst. & Gynec. 10:133 (Aug.) 1957.

IMMOLIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID, INC. 423 West 55th Street, New York 19, N. Y.



iron utilization improves the picture

In the "secondary" anemias due to chronic disease or infection, iron alone is often ineffective since its utilization is impeded by depressed bone marrow activity. However, RONCOVITE®-MF (cobalt-iron) has proved notably effective in these iron-refractory anemias^{1,2} because of the unique marrow-activating effect of cobalt-created erythropoietin, the hormone which controls the rate of erythropoiesis. Thus, RONCOVITE-MF improves iron utilization and produces rapid increases in hemoglobin and red blood cell formation.^{3,4}

Each tablet contains: Cobalt chloride, 15 mg. (cobalt as Co. 3.7 mg.) and ferrous sulfate excised, 100 mg.

(1) Weinsoft, P. P., and Bernstein, L. H. T.: Am. J. M. Sc. 230:264, 1955. (2) Gosselin, G., and Long, L. A.: Appl. Therap. 2:453, 1960. (3) Rohn, R. J.; Bond, W. H., and Klotz, L. J.: Journal-Lancet 73:317, 1953. (4) Center, W. M.: Clin. Med. 7:713, 1960. V-014-61

RONCOVITE®-mf



LLOYD BROTHERS, INC.
Cincinnati 29, Ohio

119-B



Diagnosis, Please!

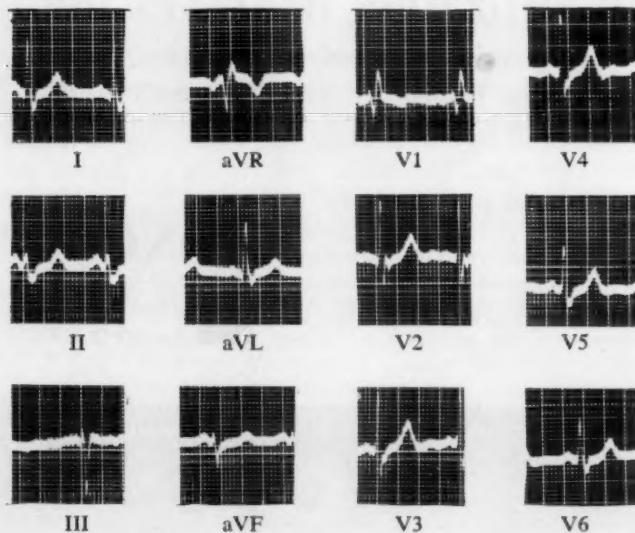
Edited by Albert L. Rubin, M.D.,
Associate Professor of Medicine, Cornell University Medical School

What Is Your Diagnosis?

CASE: A 46-year-old woman had a routine electrocardiogram taken prior to elective surgery.

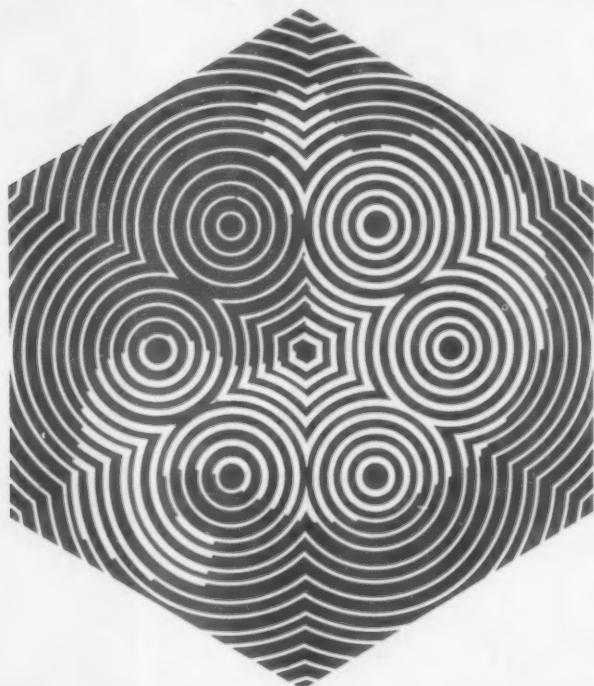
EKG: Heart rate: 75
Left axis deviation
PR interval: .18 seconds
RSR complex AVR, V
QT interval: .42 seconds
RSR complex AVR, V
Prominent wide S wave I, II, AVL, V 4-6
Delayed intrinsicoid deflection

(Answer on page 90a)



"UPSET STOMACH" ON DIGITALIS 52-year old male had rheumatic heart disease, cardiomegaly Grade II, auricular fibrillation, mitral stenosis, mitral insufficiency, and was in class III-C. For 17 months he had been in failure. Three grains of digitalis daily were required for effective maintenance therapy. When the patient began to complain of frequent "upset stomach", he was placed on digi-toxin, with an alternating 0.1 and 0.2 daily maintenance dose. Nausea became very severe after two months, and digitoxin was decreased to 0.1 mg. daily. Congestive failure increased and rehospitalization was necessary. Patient was given GITALIGIN, 0.5 mg. q.i.d. for two days, then 1.5 mg. daily for six weeks, followed by 1.0 mg. per day with 1.5 mg. every third day. Failure was effectively controlled without toxicity.¹

"DIGITALIS TOXICITY IS SEEN WITH INCREASING FREQUENCY TODAY..."²



for maximal digitalis activity with minimal toxicity

Gitaligin^{®†}

"...patients who became toxic very readily with other agents could later be satisfactorily digitalized with gitalin (GITALIGIN)."²

Wider margin of safety—frequently effective in patients refractory to other digitalis glycosides • broader clinical utility—therapeutic dose only $\frac{1}{3}$ the toxic dose • faster rate of elimination than digitoxin or digitalis leaf. □ Supplied: 0.5 mg. scored tablets—bottles of 30 and 100.

1. Dimitroff, S. P. et al.: Ann. Int. Med. 39:1189, 1953. 2. Pastor, B. H.: GP 22:85, 1960.

amorphous gitalin, White



WHITE LABORATORIES, INC. • Kenilworth, New Jersey

With proper medical management and adequate control of seizures, epileptic persons may lead productive, functioning lives.^{1,2} To implement this goal, many clinicians have come to rely on DILANTIN for outstanding control of grand mal and psychomotor attacks. Such efficacy was demonstrated in a state hospital where "...incidence of grand mal seizures was fairly constant at 7000 to 8000 seizures per year. Within a few months after the introduction of DILANTIN Sodium, the seizure rate fell to around 250 per year, without any other significant change in the program."³ DILANTIN Sodium (diphenylhydantoin sodium, Parke-Davis) is available in several forms, including Kapseals[®] 0.03 Gm. and 0.1 Gm., bottles of 100 & 1,000.

DILANTIN[®] HELPS HER SHARE IN THE GOOD THINGS OF LIFE

other members of the PARKE-DAVIS FAMILY OF ANTICONVULSANTS for grand mal and psychomotor seizures: PHEANTIN[®] Kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.), bottles of 100; for the petit mal triad: MILONTIN[®] Kapseals (phensuximide, Parke-Davis), 0.5 Gm., bottles of 100 and 1,000 and Suspension, 250 mg. per 4 cc., 16-ounce bottles · CELONTIN[®] Kapseals (methsuximide, Parke-Davis), 0.3 Gm., bottles of 100 · ZARONTIN[®] Capsules (ethosuximide, Parke-Davis), 0.25 Gm., bottles of 100. See medical brochure for details of administration, precautions, and dosage.

(1) Carter, S.: *M. Clin. North America* 37:315, 1953. (2) Maltby, G. L.: *J. Maine M. A.* 48:257, 1957. (3) Thomas, M. H., in Green, J. R., & Steelman, H. F.: *Epileptic Seizures*, Baltimore, The Williams & Wilkins Company, 1956, p. 43.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

**THIS
ART
STUDENT
HAS
EPILEPSY...**



Coroner's Corner

A beautiful imported German apothecary jar will be sent to each contributor of an unusual case report.

A 43-year-old business executive was hospitalized for sudden abdominal pain, at first epigastric, later diffuse. There was no definite ulcer history but he had had several tarry stools in previous months, one hematemesis three weeks ago and nausea before meals for several weeks. He admitted drinking two double shots of whiskey daily for the past three years and three pints of whiskey in the previous five days. He bumped into a chair the evening prior to admission and then noticed a bulge at the site of a remote inguinal herniorrhaphy.

He was in shock, writhing with pain. The abdomen was distended, tense, tympanitic and tender. X-ray showed pneumoperitoneum. Exploratory laparotomy was done, with a pre-operative diagnosis of perforated ulcer. The peritoneal cavity was full of intestinal contents and gas. No ulcer was found. Search disclosed a one inch linear tear in the ileum. This was repaired. The patient died in shock eight hours later.

Autopsy did not reveal any degenerative, neoplastic or inflammatory disease to account



for the ruptured ileum. There was no evidence of external trauma in the surface tissues.

Direct trauma to the abdomen can cause rupture of distended intestine, even though the injury may not be of sufficient force to produce external contusion. The pathologist concluded that death was due to rupture of the ileum by direct, nonpenetrating injury, possibly as a result of bumping into the chair. Since the patient had "double indemnity" life insurance, the autopsy was of utmost importance to the widow.

A. J. SEGAL, M.D.
Cleveland, Ohio



The Milibis® vaginal suppository is soft and pliant as a tampon. It offers proved therapeutic action* in an exceptional vehicle. The suppository is clean, odorless and non-staining. The course of treatment of vaginitis (trichomonal, bacterial and monilial) with Milibis is short — only 10 suppositories in most cases. Milibis® vaginal suppositories are supplied in boxes of 10 with applicator.

Winthrop LABORATORIES
New York 18, N.Y.

*97 per cent effective in a study of 564 cases;
94 per cent effective in a study of 510 cases.

Milibis (brand of glycobalsol),

helps
you "reach"
the depressed
office
patient

NIAMID.

BRAND OF NIALAMIDE

provides remission of depression—smoothly, gradually,
without "jarring" □ notably low incidence of serious com-
plications or side effects □ convenience of once-a-day dosage

Science for the world's well-being®



PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York 17, New York



restores
the will
to
improve

In Brief Niamid, brand of nialamide, is 1-(2-[benzylcarbamyl] ethyl)-2-isonicotinylhydrazine, a well-tolerated antidepressant that may correct or relieve depression on once-a-day dosage. **Indications:** Depressive syndromes of varying degrees of severity may be responsive to Niamid including: involutional melancholia, postpartum depression, depressed phase of manic-depressive reaction, senile depression, reactive depression, schizophrenic reaction with depressive component, psychoneurotic depression. ■ In neurotic or psychotic patients, Niamid may normalize or favorably modify aberrant or excessive reactions and symptoms of depression such as: phobias, guilt feelings, dejection, feeling of inadequacy, discouragement, worry, uneasiness, distrustfulness, hypochondriacal and nihilistic ideas, difficulty in concentration, insomnia, loss of energy or drive, indecision, hopelessness, helplessness, decreased functional activity, emotional and physical fatigue, irritability, inability to rest or relax, sadness, anorexia and weight loss, and withdrawal from society. **In the withdrawn patient**, Niamid may elevate the mood so that there is increased activity, increased awareness and interest in surroundings, and increased participation in group activities. Appetite may be increased and there may be decreased fatigability. Lack of clinical response to other antidepressant therapy does not preclude a favorable response to Niamid. Relief of depression may also be evidenced by elimination or reduction of the need for somatic therapy, such as electroshock. **In patients suffering from depression associated with chronic illness**, Niamid may improve mental outlook, reduce the impact of pain, decrease the amounts of narcotics or analgesics needed, and improve appetite and well-being. **In patients with angina pectoris**, Niamid has been found to be a useful adjunct to management through reduction in frequency of attacks and pain. **Dosage:** Starting dosage is 75 to 100 mg. on a once-a-day or divided daily basis. This may subsequently be adjusted depending upon the tolerance and response. Responses to Niamid are not usually rapid, and revisions of dose should be withheld until at least a few days have elapsed at each level. Increments or decrements of 12½-25 mg. are generally sufficient. A daily dosage of 200 mg. is the maximum recommended for routine use. (As much as 450 mg. daily has been used in some patients.) **Side Effects:** Niamid, in clinical use, has been characterized by a significant lack of toxicity. It is generally well tolerated. Nervousness, restlessness, insomnia, hypomania, or mania, sometimes occur. Occasional headache, weakness, lethargy, vertigo, dryness of the mouth, blurred vision, increased perspiration, constipation, mild skin rash, mild leukopenia, and epigastric distress may be obviated or modified by reductions in dose. Effects due to monoamine oxidase inhibition persist for a substantial period following discontinuation of the drug. **Precautions and Contraindications:** Hepatic toxicity has not been reported in extensive clinical studies. However, if previous or concurrent liver disease is suspected, the possibility of hepatic reactions and liver function studies should be considered. ■ The suicidal patient is always in danger, and great care must be exercised to maintain all security precautions. The apathetic patient may obtain sufficient energy to harm himself before his depression has been fully alleviated. ■ Niamid may potentiate sedatives, narcotics, hypnotics, analgesics, muscle relaxants, sympathomimetic agents, thiazide compounds and stimulants, including alcohol. Caution should be exercised when rauwolfa compounds and Niamid are administered simultaneously. Rare instances have been reported of reactions (including atropine-like effects, and muscular rigidity) occurring when imipramine was administered during or shortly after treatment with certain other drugs that inhibit monoamine oxidase. **In Cardiology:** The central effects of Niamid may encourage hyperactivity and the patient should be closely observed for any such manifestation. Orthostatic hypotension or hypertensive episodes occur in a few individuals; cardiac patients should be carefully selected and closely supervised. **In Epilepsy:** Although in some patients therapeutic benefits have been achieved with Niamid, in others the disease has been aggravated. Care should be exercised in the concomitant use of imipramine, since such treatment with monoamine oxidase inhibitors has been reported to aggravate the grand mal seizures. **In Tuberculosis:** Existing data do not indicate whether resistance of *M. tuberculosis* to isoniazid may be induced with Niamid therapy; nevertheless, it should be withheld in the depressed patient with coexisting tuberculosis who may need isoniazid. ■ As with all therapeutic agents excreted in part via the kidney, due caution in adjusting dosage in patients with impaired renal function should be observed. **Supplied:** Niamid (Nialamide) Tablets, 25 mg.: 100's—pink, scored tablets; 100 mg.: 100's—orange, scored tablets. *More detailed professional information available on request.*

Take an "inside look" at a remarkable advance in topical steroid therapy

The unique base, Veriderm, combined with the outstanding anti-inflammatory steroid, Medrol, provides effective treatment of dermatoses.

Veriderm Medrol Acetate consists of Veriderm, a base closely approximating the composition of normal skin lipids, and Medrol Acetate, the highly effective, dependable corticoid.

Topical use of Veriderm Medrol Acetate produces symptomatic relief and objective improvement of dermatoses, and at the same time aids in correcting dry skin conditions. Veriderm Medrol Acetate, less greasy than an ointment and less drying than a lotion, is indicated in atopic, contact, and seborrheic dermatitis, and in neurodermatitis, anogenital pruritus, and allergic dermatoses.

Available in four formulations: Veriderm Medrol Acetate 0.25% — Each gram contains: Medrol (methylprednisolone) Acetate 15 mg.; Methylparaben 4 mg.; Butyl-p-hydroxybenzoate 1 mg.; Veriderm (a mixture of saturated and unsaturated free fatty acids; triglycerol and other esters of fatty acids; saturated and unsaturated hydrocarbons; free cholesterol and mixed aromatics). (Veriderm Medrol Acetate 1% is also available.)

For prophylaxis against secondary infection: Veriderm Neo-Medrol Acetate 1% — Each gram contains: Medrol (methylprednisolone) Acetate 2.5 mg.; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); Methylparaben 4 mg.; Butyl-p-hydroxybenzoate 1 mg.; Veriderm (a mixture composed of saturated and unsaturated free fatty acids; triglycerol and other esters of fatty acids; saturated and unsaturated hydrocarbons; free cholesterol and mixed aromatics). (Veriderm Neo-Medrol Acetate 1% is also available.)

After control is achieved, to minimize the possibility of introducing infection, a small amount of either Veriderm Medrol Acetate or Neo-Medrol Acetate is applied directly into the affected area. Application should be made initially once or three times daily. Once control is achieved — usually within a few hours — the frequency of application should be reduced to the minimum necessary to maintain results. The 1% concentration is recommended for beginning treatment and the 0.25% preparation for maintenance therapy.

Contraindications: Local application of Veriderm Medrol Acetate or Neo-Medrol Acetate is contraindicated in tuberculous or viral skin lesions, other cutaneous infections for which an effective antibiotic or chemotherapeutic agent is not available for simultaneous application.

These preparations are usually well tolerated. However, if signs of hypersensitivity appear, discontinuation of application should be discontinued. If bacterial infection should develop during the course of therapy, appropriate local or systemic antibiotic therapy should be instituted.

Balanced in 5 Gm. and 20 Gm. tubes.

Veriderm[®]

Medrol[®]
Acetate

Neo-Medrol[®]
Acetate

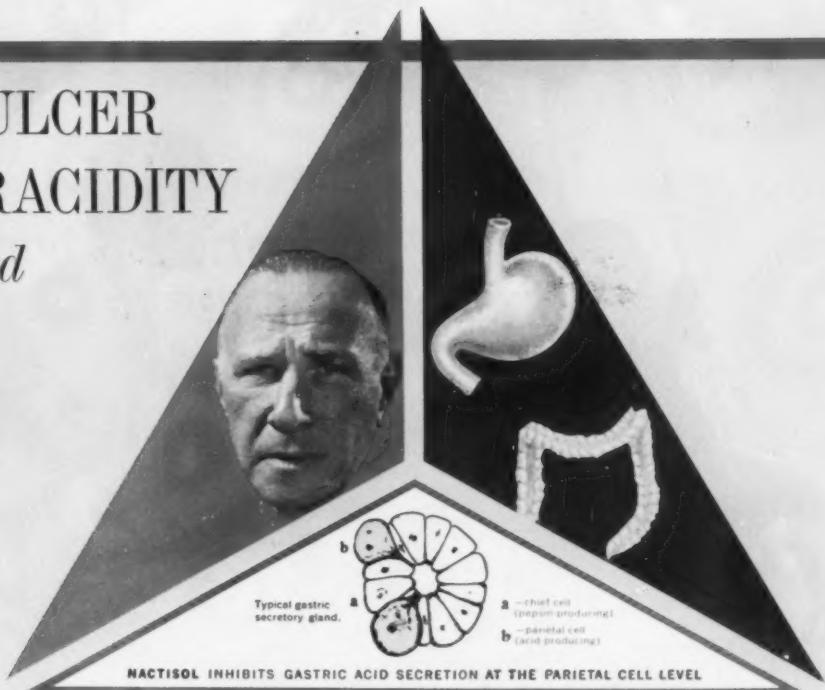
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Upjohn

The Upjohn Company, Kalamazoo, Michigan

IN PEPTIC ULCER
AND HYPERACIDITY
with associated
tension and
nervousness



NACTISOL

- suppresses gastric acid secretion at the parietal cell level
- decreases gastrointestinal hypermotility
- relieves nervousness and tension

NACTISOL combines:

NACTON® 4 mg. new inhibitor of gastric acid secretion and hypermotility
poldine methylsulfate

"...reduces the total output of gastric HCl by about 60%"¹

plus

BUTISOL SODIUM® 15 mg. "daytime sedative" with highest therapeutic
butabarbital sodium
index² (highly effective, minimal side effects)
smooth, predictable sedation of 6 hours' duration

- Side effects with NACTISOL therapy have been minimal.³⁻⁵

NACTISOL*...in scored, yellow tablets

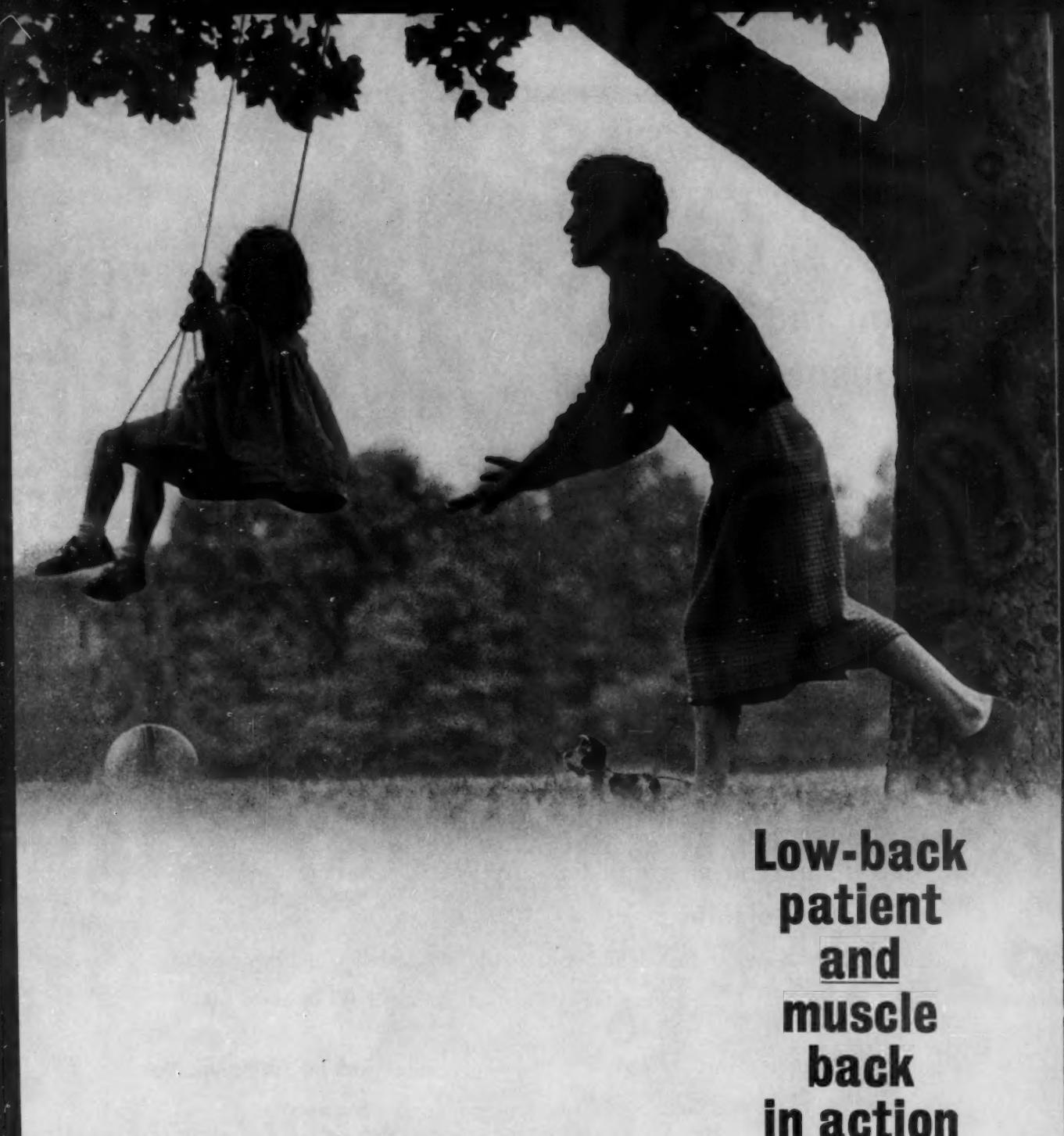
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2. Batterman, R. C., Grossman, A. J., Leifer, P., and Mouratoff, G. J.: Clinical Re-evaluation of Daytime Sedatives, Postgrad. Med. 26:502-509 (October) 1959.
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4. Lorber, S. H.: Clinical Report to McNeil Laboratories, December 6, 1960.
5. Rider, J. A.: Clinical Report to McNeil Laboratories.

McNEIL

McNEIL LABORATORIES, INC., Fort Washington, Pa.

*Trademark
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Low-back patient and muscle back in action

Prompt relief...early recovery—In low-back cases, or for patients with inflammatory or traumatic musculoskeletal complaints, RELA offers the promise of prompt relief and early recovery. In a study¹ of 212 conservatively treated low-back patients, 106 treated also with carisoprodol [RELA] were 'back in action' in one-fourth the time it took the conventionally treated group. RELA speeds recovery by a com-

bination of effects—analgesic and muscle relaxant—to reduce spasm and tension, relieve pain, restore mobility. Undesirable effects have been minimal.

SUPPLIED: Bottles of 30,350 mg. tablets.

REFERENCE: 1. Kestler, O.C.: J.A.M.A., 172:2039 (April 30) 1960. H-401.

For complete details, consult latest Schering literature available from your Schering Representative or the Medical Services Dept., Schering Corporation, Bloomfield, New Jersey.

RELA[®]
carisoprodol

Schering

measurable benefits in edema and hypertension



Before Esidrix: Pedal edema and a blood pressure of 214/110 mm. Hg.
PHOTOGRAPHS USED WITH PERMISSION OF THE PATIENT



After Esidrix: Pedal edema cleared; blood pressure reduced to 180/94 mm. Hg. (Esidrix was given adjunctively with Singoserp and digitalis.)

**plus more built-in potassium protection
than any other diuretic-antihypertensive**

Esidrix-K®

50/1000 Tablets



Supplied: ESIDRIX-K 50/1000 Tablets (white, coated), each containing 50 mg. Esidrix and 1000 mg. potassium chloride (equivalent to 524 mg. potassium).

Also available: ESIDRIX-K 25/500 Tablets (off-white, coated), each containing 25 mg. Esidrix and 500 mg. potassium chloride. ESIDRIX Tablets, 50 mg. (yellow, scored) and 25 mg. (pink, scored).

For complete information about Esidrix and Esidrix-K (including dosage, cautions, and side effects), see current Physicians' Desk Reference or write CIBA, Summit, N. J.

ESIDRIX® (hydrochlorothiazide CIBA)
SINGOSERP® (syrosingopine CIBA)

2/2989MK

C I B A Summit, N. J.



What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

How accessible must a surgeon be, following an operation, in order to avoid liability for negligence? That was the question before the Court in the following case.

The patient had undergone surgery for the correction of an epigastric hernia, and was returned to his room at 11:00 a.m. At 3:00 p.m. he was nauseated and was given Dramamine. An hour later he was cold and clammy, pale, restless, and sweating profusely. The supervising nurse on duty became concerned. She telephoned the surgeon at his office and was instructed to give the patient Dramamine.

The patient was nauseous again at 5:00 p.m. At 6:00 p.m., his blood pressure dropped ten points and he was cold and in an anxious state. The nurse again telephoned the surgeon, who said he would be at the hospital later and to continue giving Dramamine.

The patient's condition grew steadily worse. Further attempts to reach the surgeon by telephone were to no avail. In desperation, the nurse contacted the patient's family physician who directed her to continue the prescribed medication and to put the patient under oxygen.

Ten or more telephone calls were made in an attempt to locate the surgeon. At approximately 10:30 p.m., he made his appearance at the hospital.

Immediately on his arrival the surgeon

examined his patient and found him to be in a state of "early shock" with blood pressure of 80/50. He considered the possibility of internal hemorrhage, but concluded that the patient was suffering from a pulmonary embolism. He gave intramuscular antibiotics in anticipation of a pneumonic process and remained at the hospital until shortly after midnight. He then went home, feeling justified that he had done all that he could do.

At 12:40 a.m. the patient appeared worse. A nurse telephoned the surgeon at his home, and, in accordance with his instructions, further drugs, including a stimulant, were administered immediately. The patient died at 12:45 a.m. A postmortem examination showed that he had died as the result of a "hemorrhage in the peritoneal cavity."

In a malpractice action against the surgeon for the death of his patient, the jury returned a verdict in favor of the surgeon. On appeal taken by the deceased's widow, counsel argued that the question of negligence was not here within the province of the jury, but should have been decided by the Court as a matter of law. The physician's negligence, in failing to keep himself available to his patient throughout the evening, was so clear and convincing that reasonable minds could not differ in their conclusions therefrom.

How would you decide? Answer on page 234a.

The taste says, Yes!

BICILLIN® ORAL
SUSPENSION

Benzathine Penicillin G, Wyeth (Dibenzylethylenediamine Dipenicillin G)

STABLE! READY TO USE!

A Superior Oral Penicillin for Children

SUPPLIED: *Cherry flavor*—300,000 units per 5-cc. teaspoonful, bottles of 2 fl. oz.

Custard flavor—150,000 units per 5-cc. teaspoonful, bottles of 2 fl. oz.

Wyeth Laboratories, Philadelphia 1, Pa.



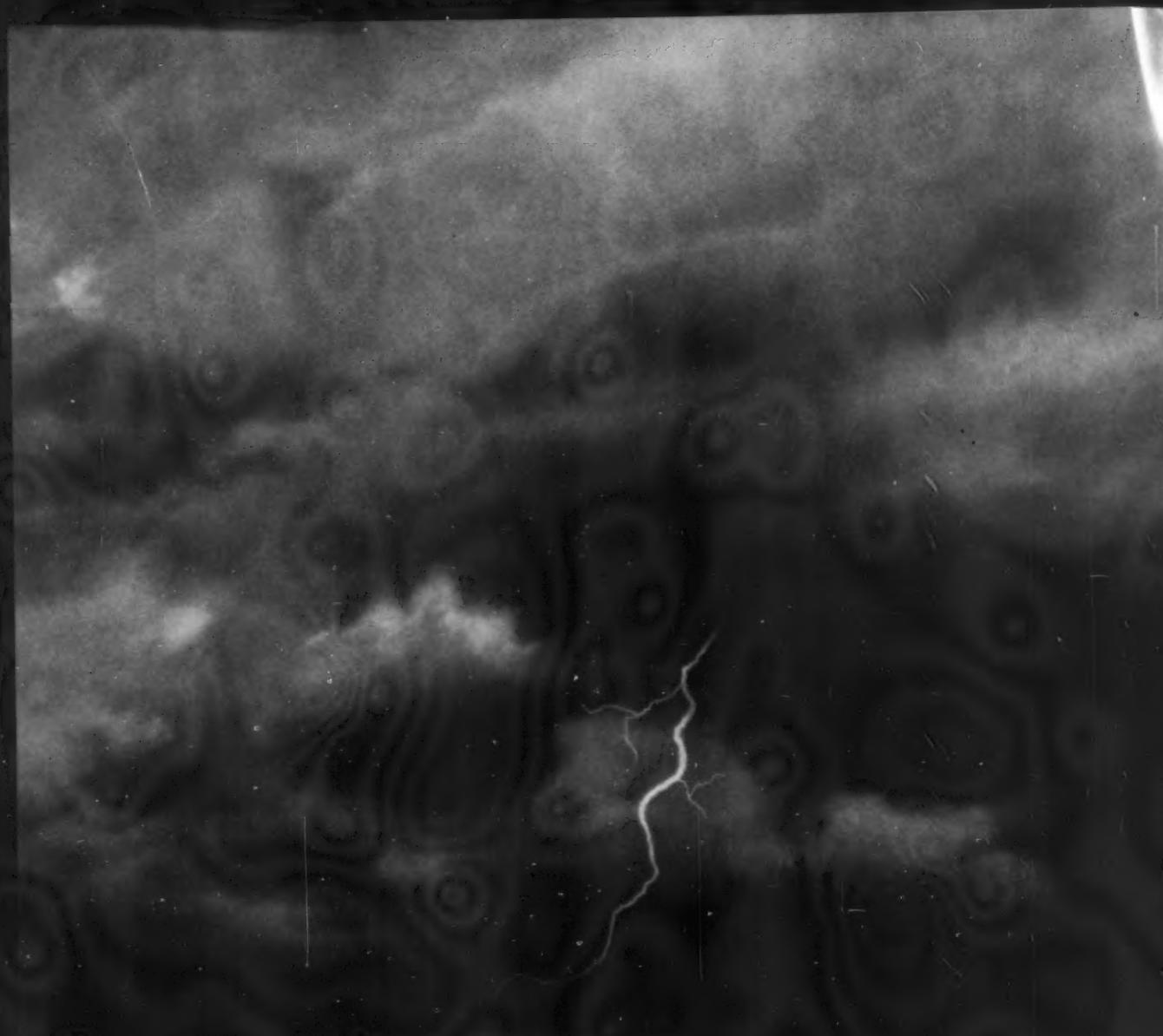


for potential ulcer...
to relieve tensions and to inhibit
hypermotility and hypersecretion

PATHIBAMATE®

PATHILON® tridihexethyl chloride Lederle with meprobamate

highly effective with minimal side effects for therapeutic/prophylactic treatment of duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis with gastrointestinal symptoms, gastric hypermotility.
CONTRAINDICATIONS: glaucoma; pyloric obstruction; obstruction of the urinary bladder neck. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative or write to Medical Advisory Department.



for patent ulcer...

to relieve tensions and to inhibit
hypermotility and hypersecretion
PATHIBAMATE®

PATHIBAMATE-400 (full meprobamate effect)—1 tablet t.i.d. at mealtime, and 2 tablets at bedtime • PATHIBAMATE-200 (limited meprobamate effect)—1 or 2 tablets t.i.d. at mealtime, and 2 tablets at bedtime • Adjust to patient response. Each Pathibamate-200 tablet contains: PATHILON, 25 mg.; meprobamate, 200 mg. Pathibamate-400 tablets contain 400 mg. meprobamate. The usual precautions pertaining to the administration of meprobamate should be observed.



LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

OUR MAN IN GOUDA

Though personally allergic to cheese, our peripatetic prober has raked his way through oceans of curds and whey in leading dairy areas, checking out a claim about colds made by a director of a cheese factory.* The claim was that a group of his employees who worked under constant conditions of temperature and humidity had only one-third as many colds as workers in other parts of the factory. *Hope-Simpson, R. E.: Roy. Soc. Hlth. J. 78:593 (Sept.-Oct.) 1958.

the search goes on



but until a cure is found... NOVAHISTINE®

FOR THE EVERYDAY COLDS
OF YOUR EVERYDAY PATIENTS

Although Novahistine formulas haven't cured a single cold . . . they have been prescribed for relief of symptoms in more than 11,700,000 patients in the last 9 years, according to National Prescription Audits.

Novahistine-DH Liquid

Relieves cough and respiratory congestion.

Novahistine-DH provides a vasoconstrictor, an antihistamine and an antitussive for combined action against symptoms of respiratory infections complicated by congested mucosa, bronchospasm or cough. Patients will appreciate the delightful taste and superior effectiveness of Novahistine-DH.

Each 5 cc. teaspoonful contains: phenylephrine HCl, 10.0 mg.; chlorprophenpyridamine maleate, 2.0 mg.; codeine phosphate, 10.0 mg.; chloroform, approx. 13.5 mg.

For adults: 2 teaspoonfuls, every 3 or 4 hours.
For children: 1 teaspoonful, every 3 or 4 hours.
For infants: $\frac{1}{4}$ to $\frac{1}{2}$ teaspoonful every 3 to 4 hours.

PITMAN-MOORE COMPANY
DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS 6, INDIANA



For those women who prefer or require an
arc-ing type diaphragm,

The New *Ramsey*® BENDEX®

embodies all of the superior features of the conventional *Ramsey* Diaphragm, together with the very best hinge mechanism contained in any arc-ing diaphragm: a thin, thin dome of pure gum rubber, a flexible cushioned rim for comfort, with just the right lateral tension to give anterior-posterior rigidity and sperm tight fit. Easily inserted, placed and removed; no introducer required; ideal for use with *Ramsey* 10-hour spermicidal jelly. Prescribe *Ramsey* "TUK-A-WAY"® Kit #703 containing *Ramsey* BENDEX Diaphragm sized 65 to 90 mm., and *Ramsey* Vaginal Jelly in 3 oz. tube. RAMSES, BENDEX, and "TUK-A-WAY" are registered trade-marks of Julius Schmid, Inc.



Julius Schmid, Inc.
423 West 55th Street, New York 19, N. Y.



Quietude for the Hypertensive

As relaxing as a mountain lake...

BUTISERPINE®

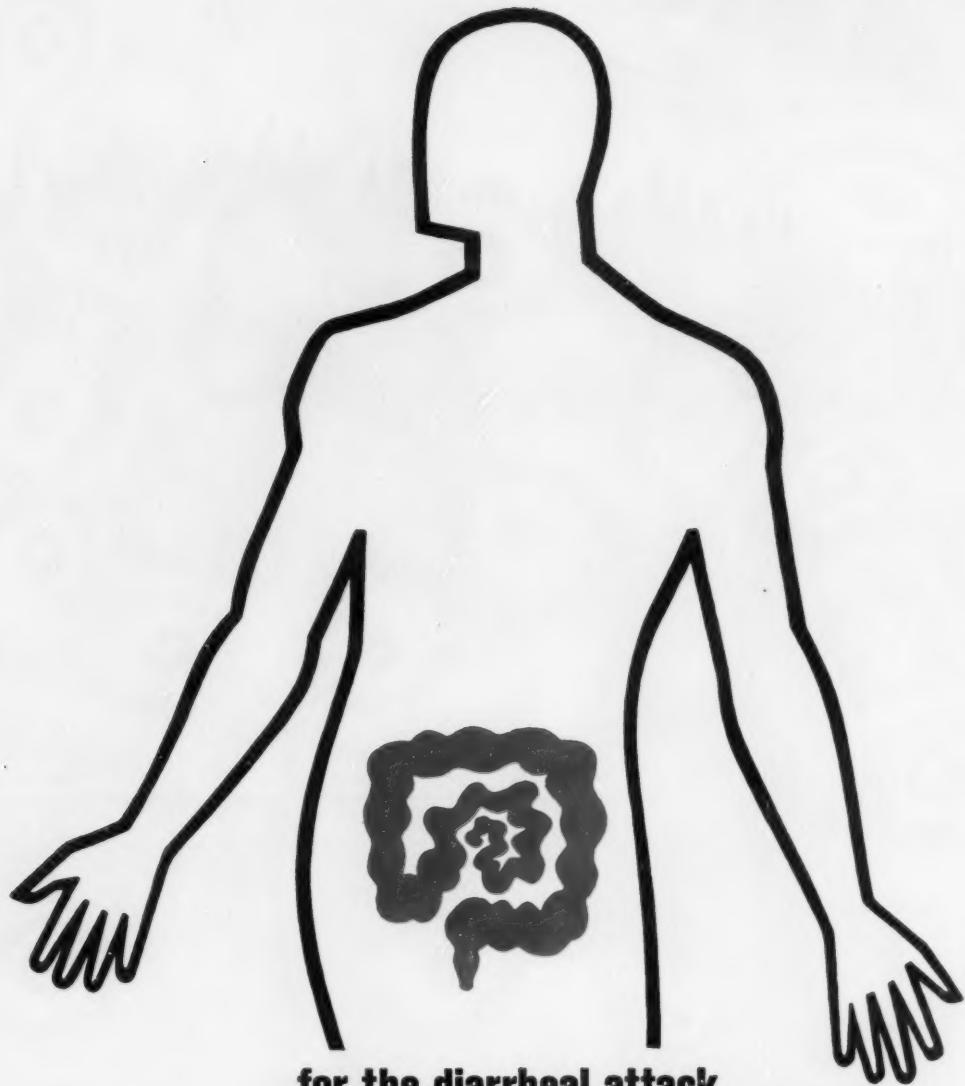
separates the hypertensive from his anxieties and tensions, lowering the blood pressure conservatively but effectively.

With its gentle calming and hypotensive actions, Butiserpine does not set up a chain of side effects. Its *low* reserpine content (0.1 mg. per tablet) reduces blood pressure smoothly; its 15 mg. of noncumulative BUTISOL SODIUM® butabarbital sodium induces relaxation without depression.

Available as: Butiserpine Tablets, Elixir, Prestabs® Butiserpine R-A
(Repeat Action Tablets)

McNEIL

McNEIL LABORATORIES, INC., Fort Washington, Pa.



for the diarrheal attack
effective—eradicates enteric bacterial pathogens
selective—does not eradicate the normal intestinal flora¹

FUROXONE® LIQUID
brand of furazolidone

New, convenient prescription size: bottle of 2 oz. Also: bottle of 16 oz.

- Exceptionally broad bactericidal range includes species and strains now resistant to other antimicrobials ■ Virtually nontoxic ■ Does not encourage monilial or staphylococcal overgrowth ■ Has not induced significant bacterial resistance ■ Dosage may be found in your PDR.

FUROXONE LIQUID is a pleasant orange-mint flavored suspension containing FUROXONE 50 mg. per 15 cc., with kaolin and pectin.

1. Mintz, A. A.: Antibiot. Med. 7:481, 1960.

EATON LABORATORIES, Division of The Norwich Pharmacal Company, NORWICH, NEW YORK



Schering

Medical Division

First total regimen in athlete's foot

ADVICIN is the first topical preparation to combine the proved *anhidrotic* and *antipruritic* benefits of an anticholinergic with widely accepted *fungicidal* and *keratolytic* agents... ADVICIN reduces local sweating, helps keep feet dry... helps relieve itching promptly... has a pleasant medicinal scent... may shorten the fungous-clearing time required with oral FULVICIN. Supplied: ADVICIN Powder—2 ounce can—for daytime use. ADVICIN Cream—50 gram tube—for nighttime use. For complete details, consult latest Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Bloomfield, New Jersey.

B-874



*2-way antifungal attack
in a moisture-controlled,
antifungal environment*

*first topical fungicide
with sweat-inhibiting action**



*first orally effective
antifungal antibiotic for ringworm*

*ADVICIN contains diphenamid methylsulfate (PRANTAL®) 2%, undecylenic acid 5%, and salicylic acid 3%.

Dulcolax®

brand of bisacodyl

tablets and suppositories

the laxative with a bibliography Geigy



The extensive bibliography* on Dulcolax, amounting to almost 100 clinical reports, strongly affirms its clinical advantages.

Induces Natural Evacuation

The action of Dulcolax is based on simple reflex production of large bowel peristalsis on contact with the colonic mucosa. As a result, stools are usually soft and well formed and purgation is avoided.

Predictable Action

With Dulcolax tablets action is almost invariably obtained overnight...with suppositories action occurs within the hour.

Wide Application

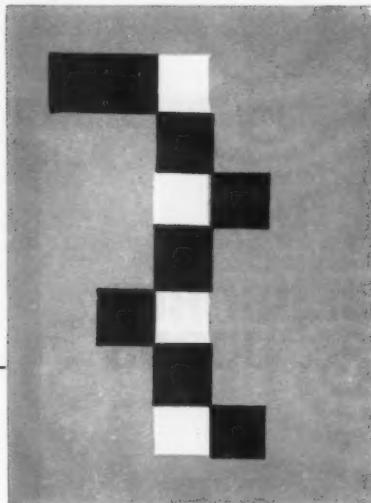
Dulcolax is as well adapted to preparation for radiographic and operative procedures as it is to the treatment of constipation.

*Detailed literature, including complete bibliography, available on request.

Dulcolax®, brand of bisacodyl: Tablets of 5 mg. and suppositories of 10 mg. Under license from C. H. Boehringer Sohn, Ingelheim.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

DU 568-60 

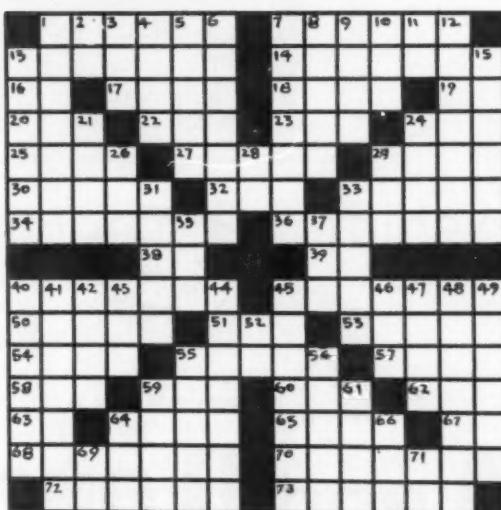


Medical Teasers

*A challenging crossword puzzle for the physician
(Solution on page 234a)*

ACROSS

1. Found in an O.P.D.
7. Pertaining to the bicuspid valve
13. A lateral ventricle of the brain
14. Inflammation of the genitals
16. Radium (symbol)
17. One of the Great Lakes
18. An ignoramus
19. Abbreviation for methyl radical, CH₃
20. Nurses' army organization (abbr.)
22. Argon, samarium (symbols)
23. The gums
24. Chemical prefix
25. Nickel, uranium, hydrogen (symbols)
27. Land elevations
29. A particular instance of disease
30. Restores to health
32. Every
33. Resinous substance
34. Implicate
36. Fatty
38. Nursing degree
39. An international organization (abbr.)
40. Just born
45. Like a nodule
50. Mental impressions
51. The Greek word for α
53. Area or cavity of the body
54. A Near East native
55. Cicatrices
57. A macula
58. Unit of velocity
59. A vessel
60. Feline
62. Sulfur, silicon (symbols)
63. Not out
64. Half
65. Pertaining to the ear



ALAN A. BROWN

DOWN

67. Manganese (symbol)
68. Not artificial
70. Partial blindness
72. A little lobe
73. Lymphomatosis
1. The skull
2. Lithium (symbol)
3. To chill
4. Girl's name
5. Residents of Erin
6. Relating to the shin
7. Bone-marrow
8. False gods
9. Any weblike tissue
10. Slow down (music, abbr.)
11. In
12. Abnormal hunger
13. Catalepsy
15. Placid
21. Restrain
24. Nose (comb. form)
26. Feminine pronoun
28. Laws (L., abbr.)
29. A policeman (slang)
31. Lesions
33. Fruit peels
35. Hotel
37. Musical twosome
40. Nicotinic acid
41. Gland near the kidney
42. Fasten
43. Part of a locomotive
44. Pertaining to touch
45. Stupor produced by narcotics
46. —— and downs
47. Licks
48. Ill health
49. Part of the eye
52. Sodium (symbol)
55. Pertaining to the body
56. Satiated
59. South American country
61. Become weary
64. Auxiliary
66. Against
69. In the direction of
71. 3.1416

**SHORTENS THE
HEALING TIME...
DIAPER RASH, BEDSORES
VARICOSE ULCERS, BURNS**



Before application of A and D Ointment—
Typical diaper rash with excoriation of skin.



After application of A and D Ointment—
Diaper rash has completely disappeared
within one week.



Before application of A and D Ointment—
Treatment-resistant varicose ulcer in elderly
obese patient.



After five weeks of daily treatment with
A and D Ointment—Ulcer completely healed.



Before application of A and D Ointment—
Second and third degree burns caused by
flaming gasoline.



After pressure gauze dressings of A and D
Ointment, changed weekly—Completely
healed, minimal scar tissue and no contrac-
tures.

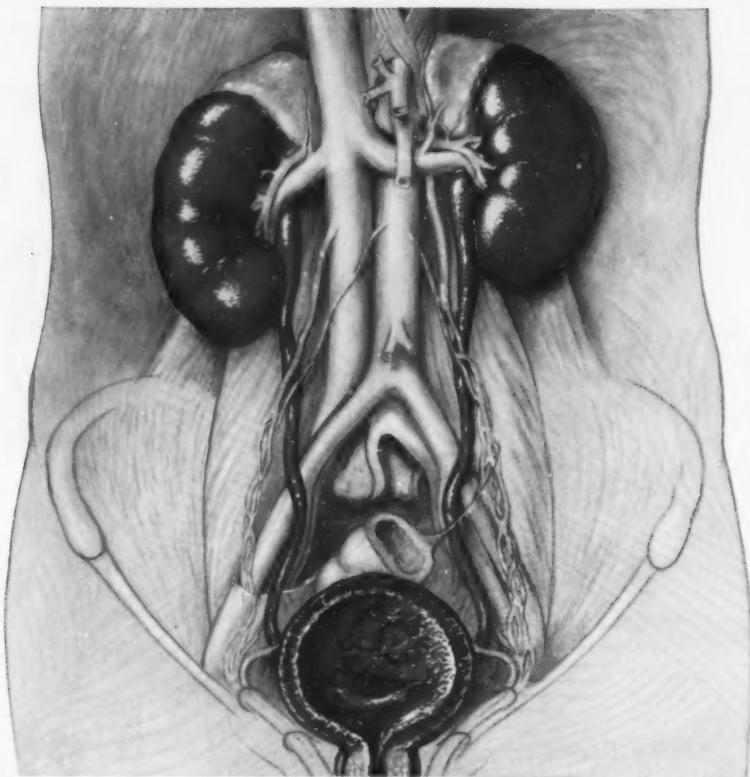
A and D OINTMENT

REG. T.M.

completely safe, highly effective in soothing and healing a wide range of skin disorders. A and D Ointment serves a useful purpose in every practice. It promotes granulation and epithelization in ulcers, burns, bedsores and wounds. In diaper rash, it instantly provides soothing relief and helps to quicken healing. / A and D Ointment is eminently safe—may be applied liberally to even the most delicate tissues. It will not stain the skin or wash away in body secretions. Easily laundered from clothing. / Available in 1½ or 4 oz. tubes; 1 or 5 lb. jars. Also available: A and D Ointment with Prednisolone, in 10 and 25 gm. tubes.

WHITE LABORATORIES, INC. / KENILWORTH, NEW JERSEY

White



Why a triple sulfonamide?

SPECTRUM— that encompasses certain common bacteria not susceptible to antibiotics, such as gram-negative bacteria of the urinary tract.

EFFICACY— in many genito-urinary infections. In upper respiratory infections and genito-urinary infections, active at the foci of infection. May succeed where bacteria are resistant to antibiotics. Rapid bacteriostatic effect.

SAFETY— safer than a single sulfonamide. Independent solubilities of the three sulfonamide components minimize danger of crystalluria. Fewer of the complications of antibiotic therapy such as allergic reactions, diarrhea, gastrointestinal upset, superinfection.

ECONOMY— lower cost to the patient than with most antibiotic prescriptions.

SUSPENSION

TABLETS

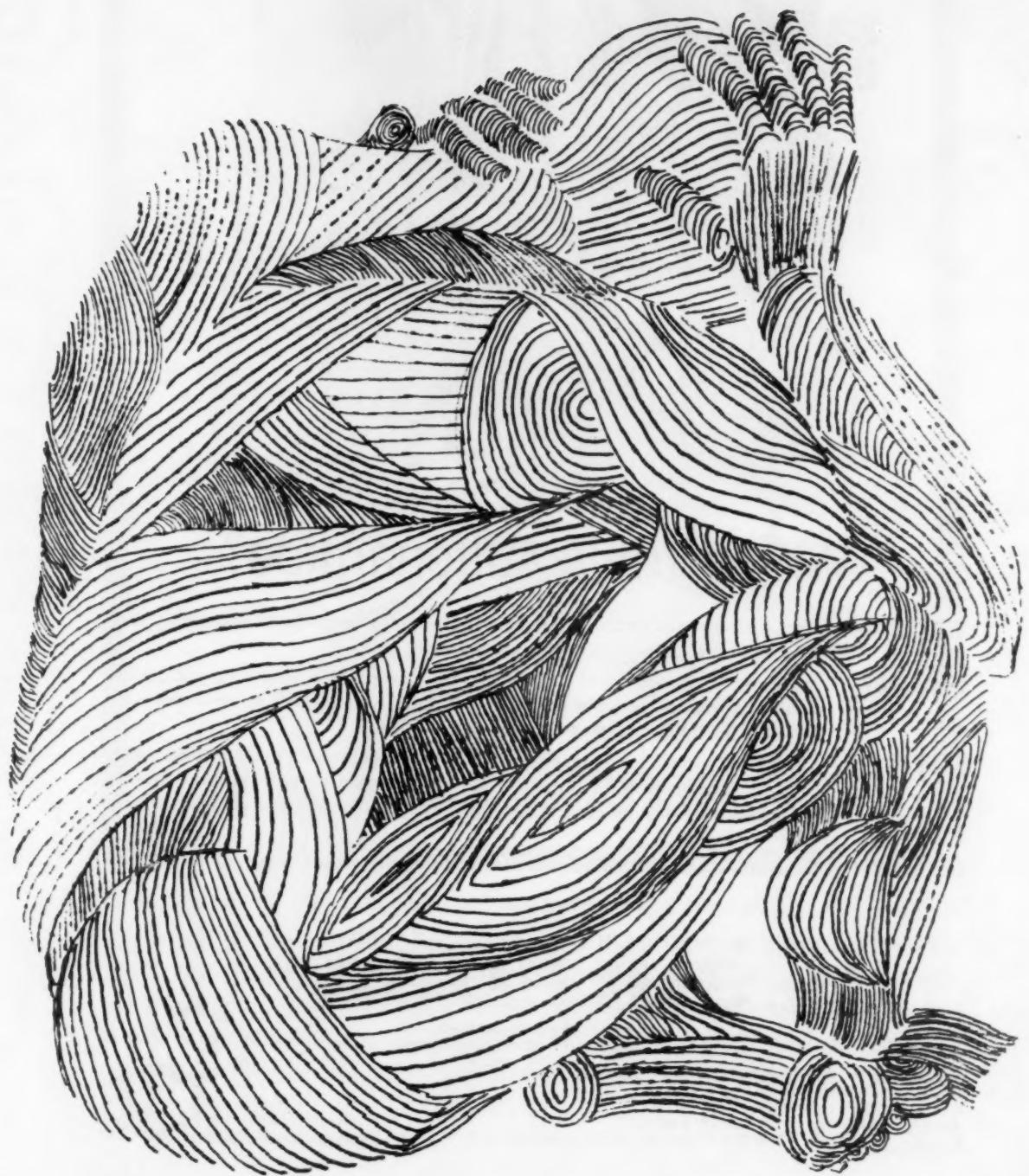
SULFOSE®

Triple Sulfonamides, Wyeth
(Sulfadiazine, Sulfamerazine, Sulfamethazine)

For further information on limitations, administration, and prescribing of SULFOSE, see descriptive literature or current Direction Circular.



Wyeth Laboratories
Philadelphia 1, Pa.



*in musculoskeletal pain
steroid or salicylate?*

Aristogesic®

Steroid-Analgesic Compound LEDERLE Capsules

**provides the
advantages of both**

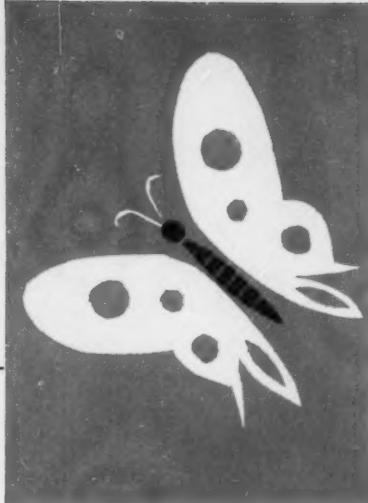
ARISTOGESIC is advantageous in the therapy of a wide range of musculoskeletal disorders, from mild to severe, because it combines the anti-inflammatory action of ARISTOCORT® Triamcinolone with the analgesic action of salicylamide. Aluminum hydroxide helps to control gastric distress and hyperacidity; and ascorbic acid compensates for loss of this essential vitamin. *Low, flexible dosage for highly individualized therapy / Well tolerated for prolonged periods / Single prescription at lower cost / Greater convenience of single capsules ...*

INDICATIONS: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, spondylitis, myositis, fibrositis, neuritis, and certain muscular strains.

PRECAUTIONS: Since this compound is designed to give relief at low steroid dosage, the risk of unwanted collateral hormonal effects such as Cushingoid manifestations, peptic ulcer and muscle weakness is relatively small. Still, the usual precautions pertaining to use of steroids in conditions in which they may be detrimental should be observed. This is particularly important in infections in which adverse effects are not dose-related. If reactions occur, discontinue drug and take appropriate measures. Each ARISTOGESIC Capsule contains: ARISTOCORT Triamcinolone, 0.5 mg.; Salicylamide, 325 mg.; Dried Aluminum Hydroxide Gel, 75 mg.; Ascorbic Acid, 20 mg.



LEDERLE LABORATORIES
A Division of AMERICAN CYANAMID COMPANY
Pearl River, New York



AFTER HOURS

No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard.—Sir William Osler

• Dr. C. G. Sheppard of Hutchinson, Minnesota, has been interested in photography, travel, and illustrated travel talks for the past 13 years. He finds it especially appealing because of the gratification he derives from "taking good pictures and relating to others my experiences in travel. It gives me the opportunity to transport myself as well as others immediately from my own surroundings to far distant fields and those memorable events which I never tire of re-living with my family and friends."

Dr. Sheppard's enthusiasm for this hobby can be summed up in these words, "it enables one, in a minute, and for as long as your audience will tolerate it, to enjoy the pleasure of being able to describe to them other lands and peoples which you have been privileged to see."



• "I took up this invigorating winter sport at the age of 39," remarks ski enthusiast, Dr. H. P. Van Cleve of Austin, Minnesota, "and this proves no one is too old!"

He recommends this sport because, "it gives the physician a chance to get out of doors during the winter months, and in addition, helps him keep physically fit." He also stated, "Due to increased utilization by the public of medical care, and decreased physician-patient ratios (in private care fields), it is becoming increasingly important for physicians to relax away from their practice. The busy physician must look to his own health, too, and I'm convinced his patients recognize and accept his absences for this purpose." The photo shows Dr. Van Cleve about to descend the slopes of Ajax Mountain, in Aspen, Colorado.

FOR COUGH AND COLD DEMONS



The ULO family in the management

NON-NARCOTIC



chlophedianol hydrochloride

SYRUP

A single chemical entity,
alpha-(2-dimethylaminoethyl)-
o-chlorobenzhydrol
hydrochloride, generically
termed chlophedianol
hydrochloride.

for control of acute cough regardless of etiology

cough suppressant equal to narcotics

The cough suppressant power of ULO is fully as great as that of the narcotics though it reaches peak action somewhat more slowly.

duration of action greater than narcotics

After reaching peak action, ULO maintains its maximal cough-suppressant effect undiminished for 4 to 8 hours.

side action less than narcotics

ULO is free from the limitations and undesirable side effects of narcotics...no constipation; no gastric irritation; no appetite suppression; no tolerance development; no respiratory depression.

of coughs and colds

ULOMINIC® SYRUP

for control of acute cough & associated allergic reactions

INHIBITS COUGH IMPULSE FOR 4-8 HOURS

the threshold of the medullary cough center is elevated while the cough reflex is not abolished

**COUNTERACTS IRRITATION IN PHARYNX,
LARYNX, TRACHEA AND BRONCHI**

inhibits tendency of histamine to cause edema of the nasopharyngeal mucosa, local irritation, and vasodilation

RELIEVES CONGESTION

reduces postnasal discharge, lessens irritation to pharyngeal and laryngeal membranes

MAKES VOLUNTARY COUGH MORE PRODUCTIVE

loosens and liquefies mucus, soothes irritated bronchial mucosa

ULO®

non-narcotic antitussive molecule chlophedianol HCl

DIAFEN®

fast-acting antihistaminic diphenylpyraline HCl

PHENYLEPHRINE HCl

sympathomimetic

GLYCERYL GUAIACOLATE

expectorant and demulcent

ULOGESIC®

T A B L E T S

*for control of acute cough
and relief from associated muscular aches, pain & fever*

ULOGESIC ENLARGES THE THERAPEUTIC DIMENSIONS OF ULOMINIC

Ulogesic also

**ALLEViates ASSOCIATED ACHEs AND
DISCOMFORTs AND ABORTs FEVER**

elevates the pain threshold with an analgesic potency the same as acetanilid, with much less toxicity

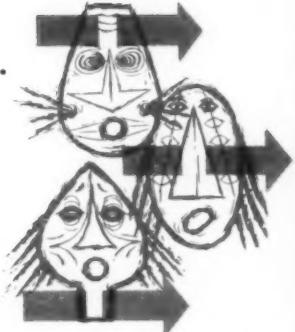
*by the addition of
APAP*

acetyl-p-aminophenol analgesic and antipyretic

turn page for formulations, indications, dosages

FOR CONTROL OF ACUTE COUGH AND COLD DEMONS...

ULO ULOMINIC ULOGESIC



INDICATIONS:

For acute cough associated with:

Upper Respiratory Infections	Bronchitis
Common Cold	Tracheitis
Influenza	Laryngitis
Pneumonia	Croup
Pertussis	Pleurisy

Coughs Associated with Allergy (Ulominic and Ulogesic)

CONTRAINDICATIONS:

Although no contraindications for ULOMINIC or ULOGESIC are known, they should be used only for acute cough.

CAUTION:

Since ULOMINIC and ULOGESIC contain an antihistaminic agent, drowsiness may occur. As they also contain a sympathomimetic agent, they should be used with caution in coronary artery disease, glaucoma, hypertension, and hyperthyroidism.

SIDE EFFECTS:

ULO
These occur only occasionally and have been mild. Nausea and dizziness have occurred infrequently; vomiting and drowsiness rarely. As with all centrally acting drugs, an infrequent case may develop excitation, hyperirritability and nightmares. The symptoms disappear within a few hours after the drug is discontinued. In three cases (1 adult and 2 children) where the drug was continued in large or even excessive amounts after stimulation was present, hallucinations developed. Upon withdrawal of the medication, the patients recovered rapidly within a few hours.

ULOMINIC and ULOGESIC
Side effects from ULOMINIC or ULOGESIC occur occasionally and are mild. Nausea, dizziness, and dryness of the mouth occur infrequently; vomiting and drowsiness rarely.

DOSAGE:

ULO
Adults: 25 mg. (1 teaspoonful) 3 or 4 times daily as required.
Children: 6 to 12 years of age—12.5 to 25 mg. (½ to 1 teaspoonful) 3 or 4 times daily as required;
2 to 6 years of age—12.5 mg. (½ teaspoonful) 3 or 4 times daily as required.

ULOMINIC
Adults: One teaspoonful (5 cc) four times daily.
Children: 6 to 12 years—½ teaspoonful (2.5 cc) 4 times daily.
2 to 6 years—¼ teaspoonful (25 drops) 4 times daily.

ULOGESIC
Adults: Two tablets 4 times daily.
Children: 6 to 12 years—one tablet 4 times daily.

ULO SYRUP: Bottles 12 oz.

ULOMINIC SYRUP: Bottles 1 pint.

ULOGESIC Riker, Bottles of 100 tablets.

AVAILABILITY:

FORMULAS

ULOMINIC

Each teaspoonful (5 cc) contains:

chlorphenadion HCl* (alpha-(2-dimethylaminoethyl)-o-chlorobenzhydrol-HCl)	15.0 mg.
diphenylpyraline HCl (1-methyl-4-piperidyl-benzhydryl-ether-HCl)	1.0 mg.
phenylephrine HCl	5.0 mg.
glyceryl guaiacolate	100.0 mg.
alcohol	6.0%

ULOGESIC

Each tablet contains:

chlorphenadion HCl* (alpha-(2-dimethylaminoethyl)-o-chlorobenzhydrol-HCl)	7.5 mg.
diphenylpyraline HCl (1-methyl-4-piperidyl-benzhydryl-ether-HCl)	0.5 mg.
phenylephrine HCl	2.5 mg.
glyceryl guaiacolate	25.0 mg.
acetaminophen	162.5 mg.

ULO
Each 5 ml. teaspoonful contains:
alpha-(2-dimethylamino ethyl)-o-chlorobenzhydrol HCl 25 mg.
chloroform, U.S.P. 0.001 ml.
Alcohol 6.65 per cent in a pleasant flavored syrup base

CAUTION: Federal law prohibits dispensing without prescription

*Patents pending



LABORATORIES, INC.
Northridge, California



about that biliary dyspepsia...

Give Supligol to increase the volume and flow of low viscosity bile through the biliary tree. The choleric and hydrocholeretic action of the whole bile plus ketocholanic acids in Supligol effectively overcomes biliary stasis and aids fat digestion.

The result is a rapid return to normal biliary function and relief of constipation, flatulence and abdominal discomfort.

Contraindication: Complete biliary obstruction.

Supligol® Tablets write for samples

Whole bile plus ketocholanic acids

American Ferment Division, Breon Laboratories Inc., New York 18, N. Y.



Who Is This Doctor?

Identify the famous physician from clues in this brief biography

Born at Berne in 1708, he studied at Leyden under Boerhaave and became the great physiologist of his day, but his prodigious achievements in and outside of medicine almost overshadow his chief role.

As to physiology, his *Primae Lineas Physiologiae* is considered the first physiology text. His *Elements Physiologiae Corporis Humani* was a giant study of anatomy and embryology as well as physiology. He also published an outstanding illustrated atlas of the anatomy of the blood vessels.

From his earliest days an infant prodigy, he worked in various fields at a furious pace. As a child he wrote Latin verse, Chaldee grammars, Latin translations and biographies. For 17 years at the U. of Gottingen he taught anatomy, surgery and botany and helped make it a great university.

He wrote some 13,000 scientific papers and maintained a scientific correspondence that is only partly extant in 67 great volumes in the Berne Library.

He established botanic gardens and churches, a philological seminary and a state orphan asylum. When he had retired to Bern in 1753, he was its public health officer and had the time for historical novels and poetry.

His poem *Die Alpen* drew attention to the beauty of Swiss nature and is said to have influenced Schiller and Coleridge. His *Versuch schweizerischer Gedichte* became the basis of a famous literary quarrel of the day on the relative merits of the natural and the artificial in poetry. Though the great Goethe derided one of his poetic observations on nature as oversentimentalized, the very notice of such a literary figure speaks for his position in letters. He appears in the memoirs of Casanova, who noted his knowledge and fine manners.

Can you name this doctor? (Answer on page 234a.)



• TABLETS
INJECTION

FOR YOUR PATIENT WITH DEPRESSION

ELAVIL.

AMITRIPTYLINE HYDROCHLORIDE

the antidepressant with a significant difference:

• given orally or parenterally, ELAVIL provides PROMPT relief of associated anxiety, tension, and insomnia • followed by control* of underlying depression

*Some depressed patients respond within 5 to 10 days, while others may require up to two weeks or longer to obtain benefit.

SPAN OF ACTIVITY OF PSYCHOACTIVE DRUGS

TRANQUILIZERS

ANTIDEPRESSANTS

ELAVIL

- a single agent (not a combination of compounds)
- effective in all types of depression...particularly useful in depressed patients with predominant symptoms of anxiety and tension.
- may be used in ambulatory or hospitalized patients
- not an amine oxidase (MAO) inhibitor



please turn page for EXCERPTS FROM A SYMPOSIUM ON DEPRESSION

SYMPONIUM ON DEPRESSION

with Special Studies of a New
Antidepressant, Amitriptyline

A SCIENTIFIC MEETING

NEW YORK, N.Y.
March 4, 1965

EXCERPTS FROM A SYMPOSIUM ON DEPRESSION

ELAVIL®
AMITRIPTYLINE HYDROCHLORIDE

INVESTIGATOR

FINDINGS

DUNLOP, EDWIN:
The treatment of
depression in
private practice.

"Amitriptyline [ELAVIL] has a specific advantage over any antidepressant currently available and I see increasing evidence of its usefulness in reducing tension, agitation and anxiety, as well as in relieving the depressive quality of the illness. Amitriptyline appears... to combine better than any other antidepressant drug the successful treatment of anxiety at one end of the scale and depression at the other. Experience in the past has shown us that, when using electroshock or analeptics, although depression can be relieved, the accompanying anxiety eventually proves more troublesome than the depressive phase of the illness. Amitriptyline successfully bridges these divergent symptoms which are displayed in varying proportions in all depressive syndromes."

"...Approximately one hundred and twenty patients have been studied with amitriptyline during the last fifteen months. It is an effective antidepressant when employed in both hospital and ambulatory patients. Its dependability and freedom from toxicity and severe side effects merit further evaluation on a broader spectrum of depressive disorders."

BENNETT, DOUGLAS:
Treatment of
depressive states
with amitriptyline.

"In those cases showing a good response, early and dramatic improvement in sleeplessness resulted and many patients noted a feeling of relaxation. The ability of some patients to reduce their night sedatives after only a month's treatment was unique in my experience of the treatment of depression."

SAUNDERS, JOHN C.:
Antidepressives: the
pith of affective therapy.

"Its primary action in hospitalized psychotics is antidepressive; this along with its very low rate of side actions make it a drug of potentially frequent application in a broad spectrum of neuro-psychiatric diseases... Since a large part of any hospital population will reach a plateau if given only a tranquilizer or an energizer, we suggest that amitriptyline alone be given prior to combination therapy, as this drug is easier and safer to administer and produces a significant improvement in a high percentage of cases (60-75)."

OSTFELD, ADRIAN M.:
Effects of an anti-
depressant drug on tests
of mood and perception.

"Finally, it appears that amitriptyline in the doses employed here is relatively effective in depressed states of neurotic proportions. Its freedom from severe side effects in doses that are therapeutically effective seems established in this patient population."

(This symposium was published in
Diseases of the Nervous System,
Volume 22, Section Two—Supplement, May 1961)

INVESTIGATOR

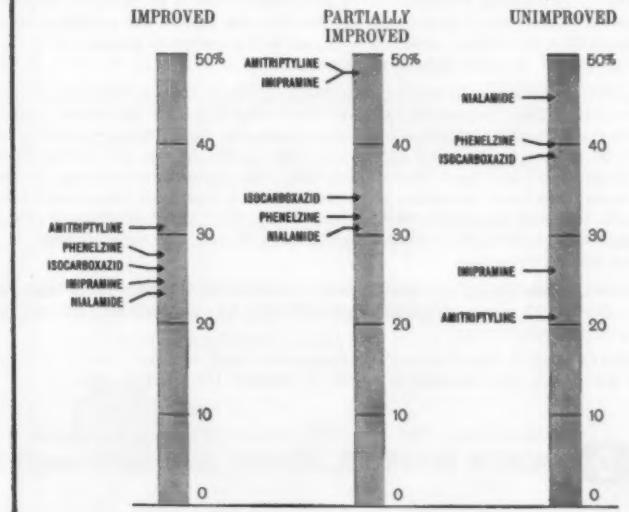
AYD, FRANK J., JR.:
A critique of
antidepressants.

FINDINGS

"Amitriptyline and imipramine induce similar side effects but, generally speaking, those of amitriptyline cause less subjective discomfort in patients than those of imipramine.

... Many of the factors that favor a satisfactory response to these drugs are also those clinically associated with the expectation of a good reaction to ECT. The danger lies in their general slowness in taking effect which makes their use hazardous for severely depressed suicidal patients who, preferably, should be treated with electroshock therapy. Otherwise, these compounds can be a satisfactory substitute for shock therapy for most depressed patients. Thus, these drugs have lessened the need for ECT. On those occasions when ECT is necessary, if the shock therapy is combined with an antidepressant, ECT can be dispensed with after a few treatments."

COMPARISON OF THERAPEUTIC RESULTS
WITH VARIOUS ANTIDEPRESSANTS



**EXCERPTS FROM A
SYMPOSIUM ON
DEPRESSION**

(continued)

ELAVIL®

AMITRIPTYLINE HYDROCHLORIDE

INVESTIGATOR

FINDINGS

DORFMAN, WILFRED:
Masked depression.

"In evaluating the effectiveness of amitriptyline in all these different settings, it was considered to be effective in 17 of the 25 patients (68%)."

FELDMAN, PAUL E.:
Psychotherapy and
chemotherapy
(amitriptyline)
of anergic states.

"Compared to other energizer compounds, particularly the hydrazines, amitriptyline appears to be relatively nontoxic. The laboratory reports for the most part remained within normal limits. Occasionally, abnormal readings were reported, but these appeared only sporadically and were not related to any clinical findings."

INDICATIONS: manic-depressive reaction—depressed phase; involutional melancholia; reactive depression; schizoaffective depression; neurotic-depressive reaction; and these target symptoms: anxiety; depressed mood; insomnia; psychomotor retardation; functional somatic complaints; loss of interest; feelings of guilt; anorexia. May be used whether the emotional difficulty is a manifestation of neurosis or psychosis,¹ and in ambulatory or hospitalized patients.^{1,2,3}

USUAL ADULT DOSAGE: Tablets — initial dosage 25 to 50 mg. three times a day, depending on body weight, severity, and clinical disturbances. Dosage may be adjusted up or down depending upon the response of the patient. Some patients improve rapidly, although many depressed patients require four to six weeks of therapy before obtaining antidepressant response. For the ambulatory patient the dosage range for Tablets ELAVIL is 40 to 150 mg. daily. In the hospitalized patient, a daily dosage up to 300 mg. may be required. Injection ELAVIL may be given IM to rapidly calm depressed patients with symptoms of anxiety and tension while instituting therapy of the underlying depression. Initial therapy is 2 to 3 cc. (20 to 30 mg.) IM, q.i.d.

The natural course of depression is often many months in duration. Accordingly, it is appropriate to continue maintenance therapy for at least three months after the patient has achieved satisfactory improvement in order to lessen the possibility of relapse, which may occur if the patient's depressive cycle is not complete. In the event of relapse, therapy with ELAVIL may be reinstated.

ELAVIL is not a monoamine oxidase (MAO) inhibitor. It does, however, augment or may even potentiate the action of MAO inhibitors. Thus, in patients who have been receiving MAO inhibitors, ELAVIL should be instituted cautiously after the effects of the MAO inhibitors have been dissipated. No evidence of drug-induced jaundice, agranulocytosis, or extrapyramidal symptoms has been noted. Side effects with ELAVIL are seldom a problem and are not serious. They are dosage-related and have been readily reversible. Side effects (drowsiness, dizziness, nausea, excitement, hypotension, fine tremor, jitteriness, headache, heartburn, anorexia, increased perspiration, and skin rash), when they occur, are usually mild. However, as with all new therapeutic agents, careful observation of patients is recommended. As with other drugs possessing significant anticholinergic activity, ELAVIL is contraindicated in patients with glaucoma, prostatic hypertrophy and urinary retention.

SUPPLY: Tablets, 10 mg. and 25 mg., in bottles of 100 and 1000. Injection (intramuscular), in 10-cc. vials, each cc. containing 10 mg. amitriptyline hydrochloride, 44 mg. dextrose, 1.5 mg. methylparaben, 0.2 mg. propylparaben, and water for injection q.s.

REFERENCES: 1. Ayd, F. J., Jr.: Psychosomatics 1:320, Nov.-Dec. 1960. 2. Dorfman, W.: Psychosomatics 1:153, May-June 1960. 3. Barso, J. A., and Saunders, J. C.: Am. J. Psychiat. 117:739, Feb. 1961.

Before prescribing or administering ELAVIL, the physician should consult the detailed information on use accompanying the package or available on request.



MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

ELAVIL IS A TRADEMARK OF MERCK & CO., INC.



**when G.I. patients
double up with pain...
double up on
symptomatic relief**

R **ENARAX®**

(oxyphencyclimine plus ATARAX®)

In peptic ulcer and functional bowel distress
ENARAX provides dual relief of symptoms: it decreases acid flow and spasm...and relieves tension.

Plus protection against flare-ups
ENARAX works continuously...gives dependable 24-hour control, usually with b.i.d. dosage.

Here's how: ENARAX combines oxyphencyclimine, an inherently long-acting anticholinergic (no slip-ups due to coatings or timing devices), plus Atarax,* one of the best tolerated tranquilizers, to decrease tension without increasing gastric secretion. The result: demonstrated success in 87% of cases.¹

Anticholinergics alone are often not enough. But G.I. complaints like "burning," hyperacidity, pain, spasm and associated tension have one hopeful thing in common: they usually respond to your prescription for ENARAX.

Dosage: The usual dosage is one ENARAX 5 or ENARAX 10 tablet twice daily—preferably in the morning and before retiring. Maintenance dose should be adjusted according to therapeutic response. Use with caution in patients with prostatic hypertrophy and only with ophthalmological supervision in glaucoma.

Supplied: ENARAX 5 (oxyphencyclimine HCl 5 mg., Atarax 25 mg.) and ENARAX 10 (oxyphencyclimine HCl 10 mg., Atarax 25 mg.), bottles of 60.

1. Hoek, C. W.: Am. J. Gastroenterol. 34:293 (Sept.) 1960.
*brand of hydroxyzine

**FOR HEMATOPOIETIC STIMULATION WHERE OC-
CULT BLEEDING IS PRESENT: HEPTUNA® PLUS —
Balanced Hematinic Formula**



New York 17, N.Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

An iron
you can
depend on
for
continued
effectiveness

CHĒL-IRON®

Brand of Ferrocholate*

"Data presented in this report indicate that iron choline citrate [ferrocholate], a chelated form of iron ...[is relatively free] from undesirable gastrointestinal effects."¹

CHĒL-IRON, in its various dosage forms, offers optimal assurance of effective therapy for more of your patients. Since it is neither ionized nor precipitated after ingestion, CHĒL-IRON rarely causes the gastrointestinal complaints reported with nonchelated iron salts, such as ferrous sulfate or ferrous gluconate.^{1,2} Thus, your supplemental or thera-

peutic iron regimen is uninterrupted, and full hematologic benefits are maintained.

CHĒL-IRON is also less likely to cause dangerous toxic reactions on accidental overdosage.¹ Supplied: CHĒL-IRON Tablets, 3 tablets equivalent to 120 mg. elemental iron, bottles of 100. CHĒL-IRON Liquid, 1 teaspoonful equivalent to 50 mg. elemental iron, bottles of 8 fl.oz. CHĒL-IRON Pediatric Drops, 1 cc. equivalent to 25 mg. elemental iron, with calibrated dropper, bottles of 60 cc.

1. Franklin, M., et al.: J.A.M.A. 166:1685, 1958.
2. A.M.A. Council on Drugs: New and Non-official Drugs 1960, Philadelphia, Lippincott, 1960, p. 521.

*U.S. Pat. 2,575,611



KINNEY & COMPANY, INC. Columbus, Indiana

Coming next month...

By Isidore Altman, M.D., Professor of Medical Care Statistics, Department of Biostatistics, University of Pittsburgh, Graduate School of Public Health, Pittsburgh, Pennsylvania.

- *Analyzing the Supply of Physicians*

By Watts R. Webb, M.D., Associate Professor, Department of Surgery, University of Mississippi, Jackson, Mississippi.

- *Clinical Guides in Shock*

By Vincent J. Collins, M.D., Director of the Department of Anesthesiology, Cook County Hospital, Chicago, Illinois and Alfred Granatelli, M.D., New York University Medical Center, New York, New York.

- *The Concept of Operative Risk*

By Louis S. London, M.D., Washington, D. C.

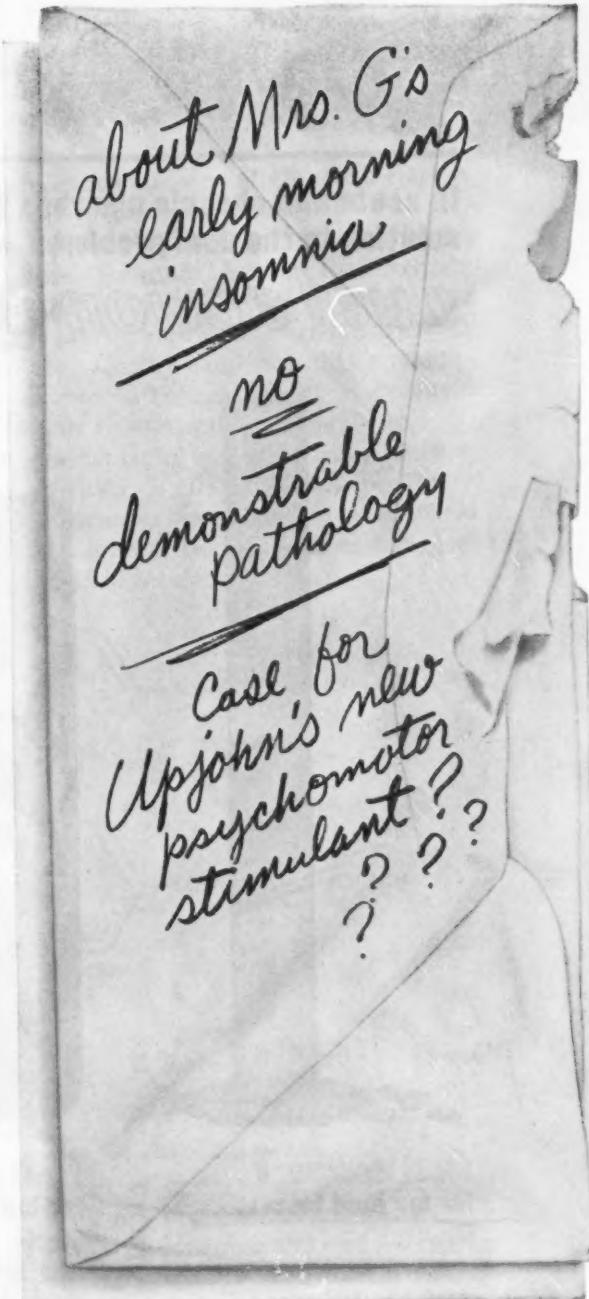
- *What Is the Present Status of Psychiatry?*

By Bennett W. Billow, M.D., Chief, Thyroid Clinic, Harlem Hospital, New York, New York.

- *Help for the Obese Hypothyroid Patient*

By Lothar Wirth, M. D., Rensselaer, New York.

- *On the Treatment of the Polycythemias*



FOR COMPLETE DETAILS ON

Monase



*Trademark, Reg. U. S. Pat. Off.—brand of tryptamine acetate

Upjohn

75th year

SEE PAGE 161a

In acute and chronic diarrhea the most effective symptomatic solution to the dual problem:

dual action **Sorboquel[®]**

(polycarbophil-thihexinol methylbromide)

tablets



fast action 1

for too fluid feces:

Exceptional water-binding capacity of polycarbophil to absorb free fecal water

(Complete information regarding the use of Sorboquel Tablets is available on request.)

dosage: For older children and adults, initial dosage of one SORBOQUEL Tablet q.i.d. is usually adequate. Severe diarrheas may require six, or even eight, tablets in divided daily doses. (Dosages exceeding six tablets a day should not be employed over prolonged periods.)

Supplied: Sorboquel Tablets, bottles of 50 and 250. Each tablet contains 0.5 Gm. polycarbophil and 15 mg. thihexinol methylbromide.

WHITE LABORATORIES, INC., Kenilworth, New Jersey

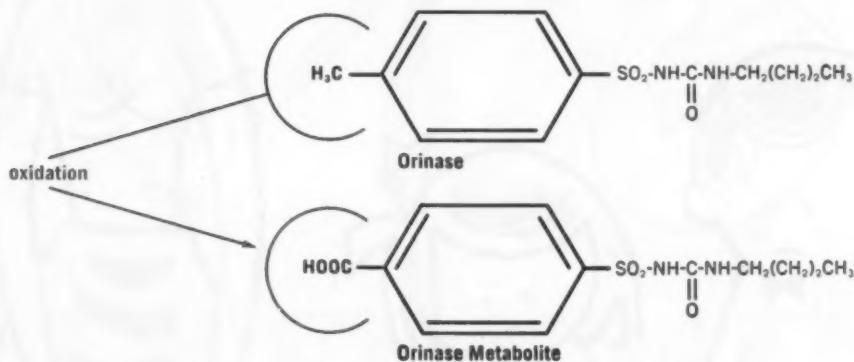


Why is the methyl "governor" in Orinase so important?

One of the most significant advantages of Orinase therapy is the rarity of associated hypoglycemic reactions.

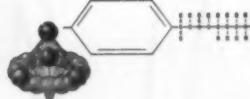
This widely-reported clinical benefit is a function of the exclusive Orinase methyl "governor." Lending itself to ready oxidation (principally, it is thought, a hepatic process), the methyl group ensures prompt metabolic inactivation of the Orinase molecule. What actually happens is that a rapidly- and continuously-excreted carboxy-metabolite is produced that has no hypoglycemic activity at the existing levels.

As a result of the oxidation of its methyl group, Orinase shows a decline in activity soon after it reaches its effective peak in the plasma. Maintenance dosage serves to reduce blood sugar levels to normal, but rarely below that point, and there is no reported problem of accumulation.



Orinase*

An exclusive methyl "governor" minimizes hypoglycemia



Indications and effects: The clinical indication for Orinase is stable diabetes mellitus. Its use brings about the rapid control of sugar, glycosuria diminishes, and such symptoms as pruritis, polyuria, and polyphagia disappear.

Dosage: There is no fixed regimen for initiating Orinase therapy. A simple starting method is as follows: First day—1 tablet; second day—4 tablets; third day—2 tablets. The daily dose is then adjusted—raised, lowered or maintained at the same level—whichever is necessary to maintain optimum control.

Patients receiving insulin (less than 20 units)—discontinue insulin and institute Orinase: (20 to 40 units). If Orinase is a complete success, up to 40% reduction in insulin dose with a further careful reduction as response to Orinase is observed; (more than 40 units) reduce insulin by 20%; and initiate Orinase with a further careful reduction in insulin dosage as response to Orinase is observed. In candidates for combined Orinase-insulin therapy, an individualized schedule usually obtainable during a trial course of two or more weeks.

Contraindications and side effects: Orinase in contraindicated in patients having juvenile-onset, unstable or brittle types of diabetes mellitus; history of diabetic coma, fever, severe trauma, or pregnancy.

Side effects are mild, transient and limited to approximately 3% of patients. Hypoglycemia and toxic reactions are extremely rare. Hypoglycemia is most likely to occur during the period of transition from insulin to Orinase or after untoward

Copyright 1961, The Upjohn Company

reactions to Orinase are usually not of a serious nature and consist principally of gastrointestinal distress, headache, nausea, variable allergic skin manifestations. The gastrointestinal disturbances (nausea, epigastric fullness, heartburn) and headache appear to be related to the size of the dose, and they frequently subside when the dose is reduced to maintenance levels or the total daily dose is administered in divided portions after meals.

The allergic reactions (urticaria, rash, erythema, and urticarial, morbilliform, or maculopapular eruptions) are transient reactions, which frequently disappear with continued drug administration. However, if these reactions persist, Orinase should be discontinued.

Clinical toxicity: Orinase appears to be remarkably free from gross clinical toxicity on the basis of over 10 years of clinical use.

Crystalluria or other unusual

toward effects on renal function have not been observed.

Over 650,000 diabetics have shown Orinase to be remarkably free

of side effects. There has been reported only one case of cholestatic jaundice following massive administration, which occurred in a patient with pre-existing liver disease and which rapidly resolved upon discontinuance of the drug.

Each tablet contains:

Tolbutamide 0.5 Gm.
Supplied: In bottles of 50.

*Trademark, Reg. U.S. Pat. Off.—

June, 1961

The Upjohn Company, Kalamazoo, Michigan

Upjohn

IRON: often a minus in moms and minors...





LIVITAMIN[®]

... the hematinic with built-in nutritional support

Many growing children and most women of menstrual age deplete their iron reserves and slide into iron-deficiency anemia.

Livitamin changes the minus to a plus because it restores depleted iron reserves and also provides integrated nutritional support.

Iron in Livitamin is well absorbed, with minimum gastric upset and constipation. And with Livitamin there is no worry about teeth stain . . . or taste acceptance.

WRITE FOR LITERATURE
AND DOSAGE INFORMATION.

FORMULA: Each fluidounce contains:

Iron, peptonized (equiv. in elemental iron to 71 mg.)	420 mg.
Manganese citrate, soluble, N.F.	158 mg.
Thiamine hydrochloride	10 mg.
Riboflavin	10 mg.
Cobalamin	20 mcg.
Nicotinamide	50 mg.
Pyridoxine hydrochloride	1 mg.
Pantothenic acid	5 mg.
Liver fraction 1	1 Gm.
Rice bran extract, U.S.P. XIV	1 Gm.
Inositol	30 mg.
Choline	60 mg.

SUPPLIED: Liquid: 8 oz. bottles, pints, gallons; Capsules:
Bottles of 100, 500, 1000. Also available as LIVITAMIN
with INTRINSIC FACTOR: bottles of 100 capsules.

THE S. E. MASSENGILL COMPANY

Bristol, Tennessee

New York

Kansas City

San Francisco

(VOL. 89, NO. 11) NOVEMBER 1961

A high-contrast, black and white photograph showing a close-up of a person's arm and hand. A caliper is being used to measure the circumference of the upper arm. The lighting is dramatic, casting deep shadows and highlighting the texture of the skin and the metallic surfaces of the caliper.

when your patient fails

If fatness is the problem, the skinfold test will tell...

Studies emphasize that persons of "normal" body weight exhibit differences in their fatness and that body weight is an imperfect guide to body fat.^{2,4,5} Recently, the calibrated measurement of skinfolds has received increasing clinical attention as a method of measuring obesity — because of its simplicity, rapidity and accuracy.^{1,2}

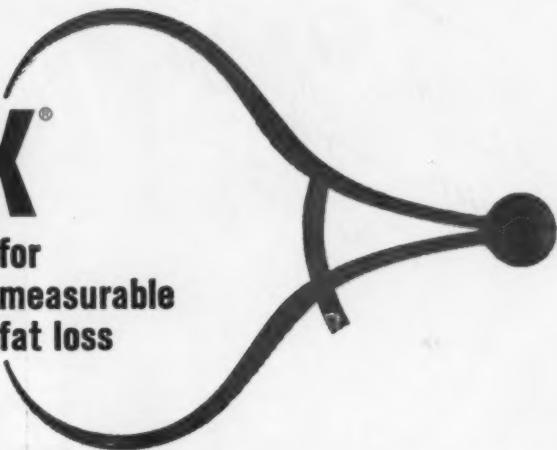
Measurement is made at selected sites with special constant tension calipers.³ Detailed information on the skinfold test is given in a special booklet, available to physicians on request.

the skinfold test

NEW BAMADEX® SEQUELS® for measurable fat loss

Dextro-amphetamine sulfate with meprobamate

Sustained Release Capsules



NEW BAMADEX SEQUELS contain the appetite-suppressant, *d*-amphetamine, effectively balanced with the tranquilizer, meprobamate, for sustained, effective appetite control without overstimulation of the central nervous system. One BAMADEX SEQUELS capsule suppresses appetite during the day . . . carries the patient through the critical period of compulsive eating . . . helps establish a new pattern of eating less — the ultimate aim of therapy.

Each capsule contains: d-amphetamine sulfate, 15 mg., meprobamate, 300 mg. **Dosage:** One capsule daily, preferably in the morning. **Supply:** Bottles of 30. **Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or who are severely hypertensive.

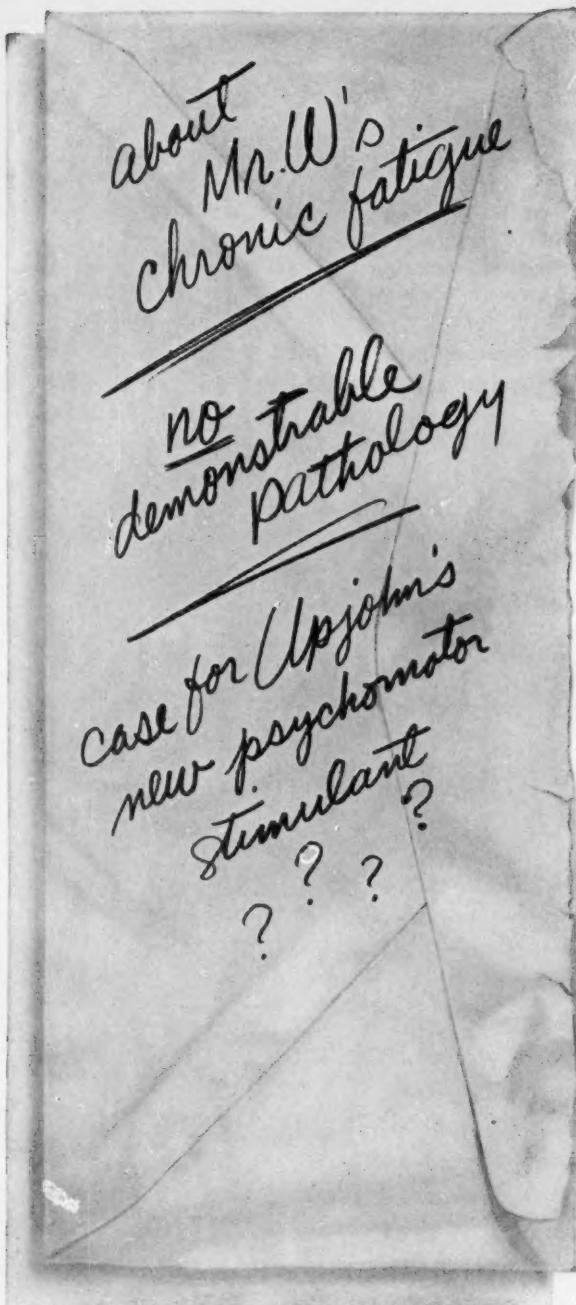
REQUEST COMPLETE INFORMATION ON INDICATIONS, DOSAGE, PRECAUTIONS AND CONTRAINDICATIONS FROM YOUR LEDERLE REPRESENTATIVE OR WRITE TO MEDICAL ADVISORY DEPARTMENT.

References: 1. Best, W.R.: J. Lab. & Clin. Med. 43:967 (1954). 2. Brozek, J. and Keys, A.: Nutrition Abstr. & Rev. 20:247 (1950). 3. Garn, S.M. and Shamir, Z.: In *Methods for Research in Human Growth*. Charles C. Thomas, Springfield, Ill., 1958, p. 64. 4. Mayer, J.: Postgrad. Med. 25:469 (1959). 5. Tanner, J.M.: Proc. Nutrition Soc. 18:148 (1959).

(Lange Skinfold Caliper courtesy of Kentucky Research Foundation, Wenner-Gren Aeronautical Research Laboratory, University of Kentucky, Lexington, Kentucky)



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York



FOR COMPLETE DETAILS ON

Monase* 

*Trademark, Reg. U.S. Pat. Off.—brand of stryptamine acetate

Upjohn

SEE PAGE 161a

X-RAY DIAGNOSIS

(Answer from page 33a)

COOLEY'S ANEMIA

Marked widening of the medullary cavities of the skull (including the facial bones) and of the distal portions of both upper extremities. The widening has produced thinning of the cortices. There are numerous small calcific areas in the medullary cavities as result of infarcts.

DERMATOLOGICAL DIAGNOSIS

(Answer from page 40a)

ALLERGIC CONTACT DERMATITIS DUE TO RAGWEED OLEORESIN.

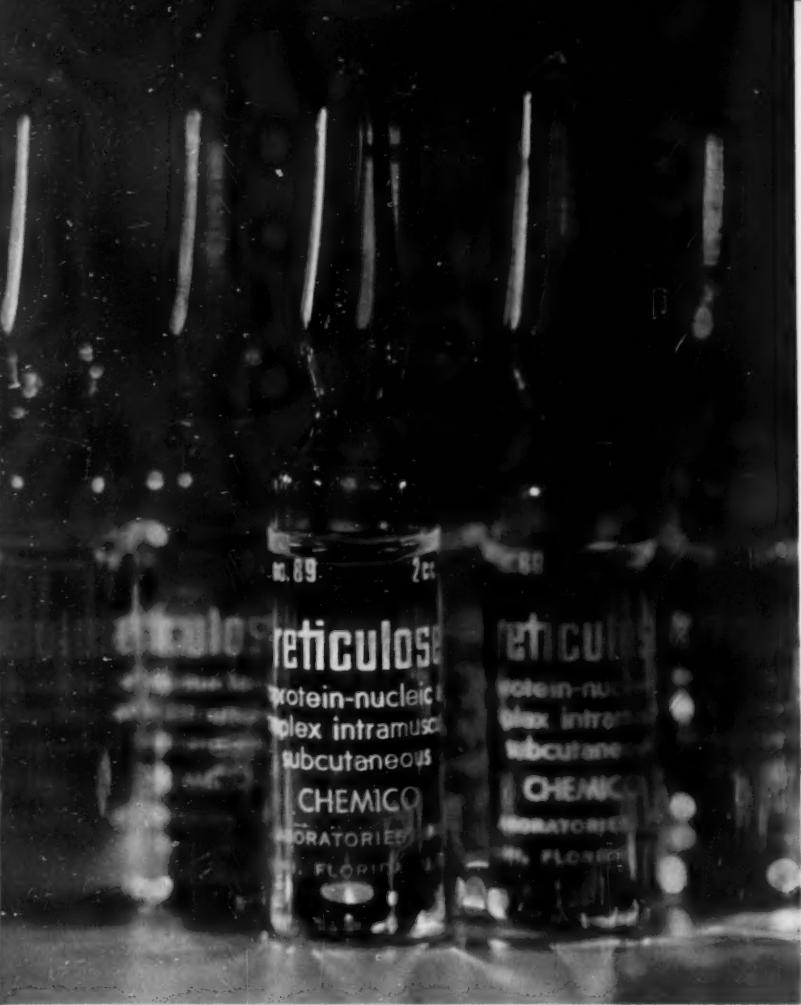
EKG DIAGNOSIS

(Answer from page 46a)

COMPLETE RIGHT BUNDLE BRANCH BLOCK
The tracing illustrates the typical findings of complete right bundle branch block. The presence of RBBB does not necessarily indicate myocardial disease, in contrast to LBBB.

the first antiviral biotic with proven clinical results





III

reticulose®

LIPOPROTEIN-NUCLEIC ACID COMPLEX

RETICULOSE HAS BEEN REPORTED TO BE SUCCESSFUL IN THE THERAPEUTIC MANAGEMENT OF:

Herpetic diseases, 3, 5, encephalitis, 1, 2, 3, generalized vaccinia, 3, 4, infectious hepatitis, 3, influenza, Asian influenza, 3, upper respiratory viral infections, 3, infectious mononucleosis, 3, mumps orchitis, 2.

Reticulose is nontoxic, free from anaphylactogenic properties, is miscible with tissue fluids and blood sera. It is an injectable product, administered intramuscularly, supplied in 2 cc. ampoules and is extremely stable.

Dosage: *acute*; acute infection and seriously ill patient . . . one 2 cc. ampoule intramuscularly each 4 to 6 hours, reducing dosage as therapeutic response is established. *ambulatory*; in acute infection of ambulatory patient . . . one 2 cc. ampoule intramuscularly each 12 to 24 hours. *subacute*; in subacute infection . . . one 2 cc. ampoule intramuscularly daily. In children under five years of age . . . $\frac{1}{2}$ ampoule is recommended according to above schedule. Contraindications: In states of hypersensitization (severe allergies, etc.). Active tuberculosis.

Bibliography: 1. Anderson, R. H., Thompson, R. M., *Treatment of Viral Syndromes*, Va. Med. Mo. Vol. 84-347 353, 7-57. 2. Scientific Exhibit, Va. State Medical Soc., Washington, D.C. Oct. 1957. 3. Symposium Viral Diseases, Miami, Fla. September, 1960. 4. Reynolds, R. M., *Vaccinia, Archives of Pediatrics*, Vol. 77 No. 10 Oct. 1960. 5. Wegryn, S. R., Marks, Jr. R. A., Baugh, J. R., *Herpes Gestationis*, *American Journal Ob. and Gyn.*, Vol. 79 Apr. 1960.

Literature is available upon request.

CHEMICO LABORATORIES, INC. 7250 N.E. FOURTH AVE., MIAMI, FLORIDA

Sultrin CREAM

TRADEMARK

(TRIPLE SULFA CREAM-WF*)

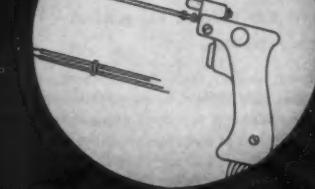
Against Secondary Invaders
in Trichomoniasis



In Nonspecific Vaginitis



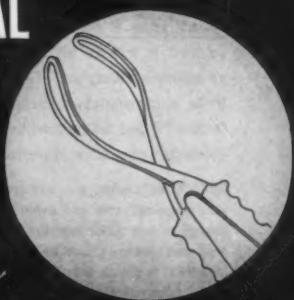
NEW WHITE FORMULATION FOR LOCAL CERVICOVAGINAL THERAPY



After Cervical Cauterization,
Cervical or Vaginal Surgery

White SULTRIN Cream, formerly available in buff-colored Triple Sulfa Cream, destroys a wide variety of vaginal pathogens and even helps eradicate "difficult" trichomonads by restoring the normal vaginal pH. Outstandingly effective in many obstetric and gynecologic conditions, this triple sulfonamide cream promotes rapid healing, relieves inflammation, minimizes discomfort, and significantly reduces odor and discharge. Supplied: 78 Gm. tube with or without applicator.

Also available: SULTRIN Triple Sulfa Vaginal Tablets.

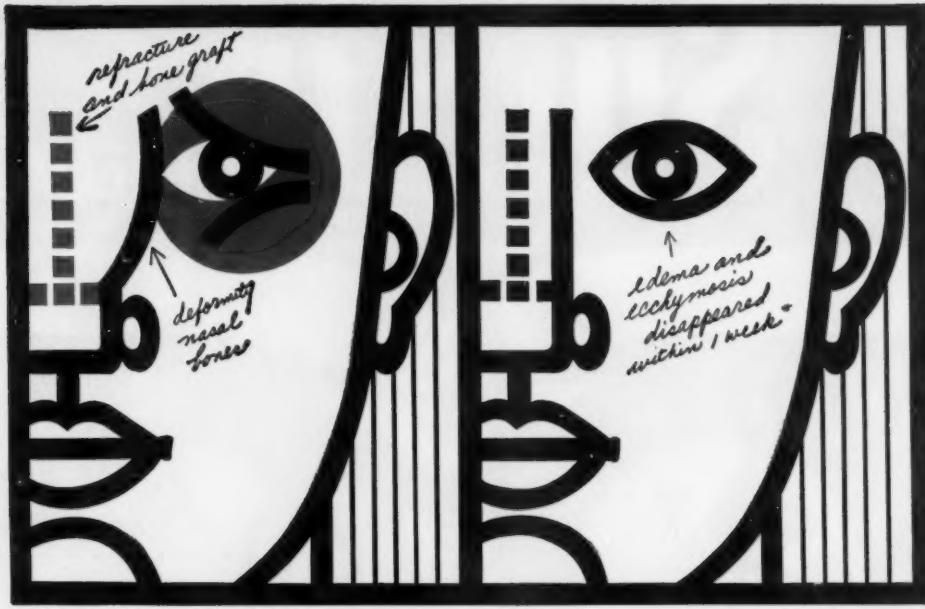


In Postpartum Care

WHITE FORMULATION

ACTIVE INGREDIENTS: SULFATHIAZOLE 3.42%, SULFACETAMIDE 2.86%, N¹BENZOYSULFANILAMIDE 3.7%, AND UREA 0.64%





*Case Reports on File, Wampole Laboratories

ANNOUNCING: the first oral enzyme preparation as efficacious as an injection

Chymotrypsin is the only orally administered proteolytic enzyme likely to reach the site of inflammation in active form. In contrast to trypsin, which is rapidly inactivated, chymotrypsin remains relatively stable in human intestinal juice.^{1,2} Evidence of systemic absorption—Experimental: Radioactive studies show blood levels after one 20 mg. AVAZYME tablet comparable to those of intramuscular injection of 5 mg. chymotrypsin.^{1,3} Clinical: Oral AVAZYME therapy reversed the inflammatory process in chronic and acute conditions; prevented severe postoperative edema and ecchymosis.^{4,5} Well tolerated and practical—Eliminates painful or necrotizing injections, and reduces the risk of allergic or anaphylactoid reactions.

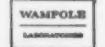
INDICATED in trauma, pre- and post-surgery, thrombophlebitis, ophthalmology, obstetrics and gynecology, urology, respiratory conditions, otolaryngology, oral and dental pre- and post-surgery. **Dosage:** In severe cases, two tablets four times daily followed by a maintenance dosage of one tablet four times daily. In mild cases, one tablet four times daily is sufficient. In the presence of infections, appropriate antibiotic therapy should be used concurrently. AVAZYME is compatible with all commonly used drugs. Available as crystalline chymotrypsin (AVAZYME) in yellow enteric coated tablets equivalent in proteolytic activity to 50,000 Wampole Units (approximately 20 mg.), bottles of 48.

NOTE: In the event that AVAZYME tablets are not readily obtainable, the pharmacist can be assured of supplies by calling his wholesaler. AVAZYME is carried by all major wholesalers.

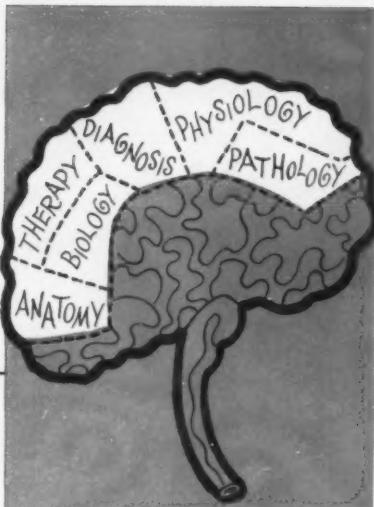
REFERENCES: 1. Avakian, S.: New England J. Med. 264:764, 1961. 2. Wohlgemuth, A., Kabacoff, B. L., and Avakian, S.: to be published. 3. Bogner, R. L.: to be published. 4. Coleman, J. M., et al.: Intestinal Absorption of Crystalline Chymotrypsin, Exhibit presented at the Scientific Session of the American Academy of General Practice, Miami Beach, Florida, April 17, 1961. 5. Monninger, R. H. G.: scheduled for publication in Clinical Medicine, 1961.

NEW
Avazyme®
an all crystalline chymotrypsin tablet

An orally administered enzyme with proven absorption.
A research development of Wampole Laboratories.



Stamford, Connecticut



Mediquiz

These questions were prepared especially for Medical Times by the Professional Examination Service, a division of the American Public Health Association. Answers will be found on page 23a.

1. Patients receiving bacitracin should be watched for evidence of:

- A) Marrow depression.
- B) Hepatocellular damage.
- C) Renal injury.
- D) Exfoliative dermatitis.
- E) Intestinal tract bleeding.

2. Of the following the most effective treatment for lymphosarcoma is:

- A) Roentgen ray therapy.
- B) A-methopterin.
- C) Tri-ethylene melamine.
- D) Urethane.
- E) Myleran.

3. Band keratopathy is usually associated with all of the following conditions *except*:

- A) Uremia.
- B) Renal tubular acidosis.
- C) Sarcoidosis.
- D) Hyperparathyroidism.
- E) Vitamin D intoxication.

4. The Lisfranc amputation of the foot is:

- A) A subastragaloid disarticulation.
- B) An amputation through the middle third of the leg.
- C) A tarsometatarsal disarticulation.
- D) A mediotarsal disarticulation.
- E) An amputation just above the malleoli.

5. A syndrome characterized by red or cya-

notic, painful, puffy extremities aggravated by warmth and relieved by cold, is known as:

- A) Livido reticularis.
- B) Pernio.
- C) Raynaud's disease.
- D) Acrocyanosis.
- E) Erythromelalgia.

6. Most children afflicted with phenylpyruvic oligophrenia have:

- A) Ichthyosis.
- B) A dark complexion.
- C) Impetigo.
- D) A fair complexion.
- E) Nevi.

7. In carcinoid heart disease serotonin is destroyed in the:

- A) Kidneys.
- B) Liver.
- C) Reticulo-endothelial system.
- D) Spleen.
- E) Lungs.

8. The most common primary neoplasm of bone originating in the sacrum is the:

- A) Fibrosarcoma.
- B) Benign giant cell tumor of bone.
- C) Giant osteoid osteoma.
- D) Osteochondroma.
- E) Chordoma.

Concluded on page 98a

WHAT ELSE IS MISSING?

Only the cold symptoms with
HYCOMINE COMPOUND tablets



For Complete Symptomatic Relief of Colds

HYCOMINE® COMPOUND

TABLETS

a new combination* designed to relieve a wide variety of symptoms encountered in respiratory tract infections, including the common cold

each HYCOMINE Compound Tablet contains:

- antitussive and smooth muscle relaxant —
- antihistaminic —
- nasal decongestant —
- analgesic and antipyretic —
- mild stimulant —

6.5 mg. HYCODAN® [5 mg. dihydrocodeinone bitartrate (warning: may be habit-forming) and 1.5 mg. homatropine methylbromide]
2 mg. chlorpheniramine maleate
10 mg. phenylephrine hydrochloride
250 mg. N-acetyl-p-aminophenol
30 mg. caffeine

DOSAGE: Average Adult Dose: 1 tablet four times a day. May be habit forming. Federal law permits oral prescription.

Literature on request



ENDO LABORATORIES • Richmond Hill 18, New York

**ARMOUR PHARMACEUTICAL COMPANY
ANNOUNCES THE FIRST SELECTIVE TENSITROPIC**

L I S T I C A[®]

I am pleased to inform you of the latest development in our Company's continuing research for superior chemotherapeutic agents.

For patients suffering from tension/anxiety states, we are offering the medical profession Listica—a new and selectively different monocarbamate. Frankly, we would be hesitant about entering a field already crowded with good drugs were it not for the marked differences Listica presents.

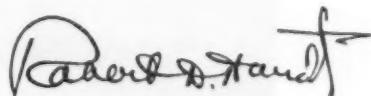
Listica is not "just another tranquilizer." We, therefore, call it **The First Selective Tensitropic**. Here are the reasons why:

New Listica allays tension/anxiety in as many as 89% of cases by selectively inhibiting impulses through internuncial pathways of the central nervous system. However, it does not affect the unconditioned response; thus, Listica does not induce apathy or impair acuity.

The past three and one-half years of clinical studies have demonstrated the safety and efficacy of Listica in 1,759 patients. There have been **no reports of contraindications, toxicity, habituation or serious side effects.**

One tablet q.i.d. is adequate dosage to allay tension/anxiety, maintain acuity, and promote **eunoia***—"a normal mental state." This simple, effective dose remains the same, even in maintenance therapy.

We are sending you samples and published clinical reports on Listica. We will be happy to send you a copy of the first "Symposium on Hydroxyphenamate" on request. I believe you will find Listica a valuable addition to the arsenal of chemotherapeutics for combatting tension/anxiety in your practice.



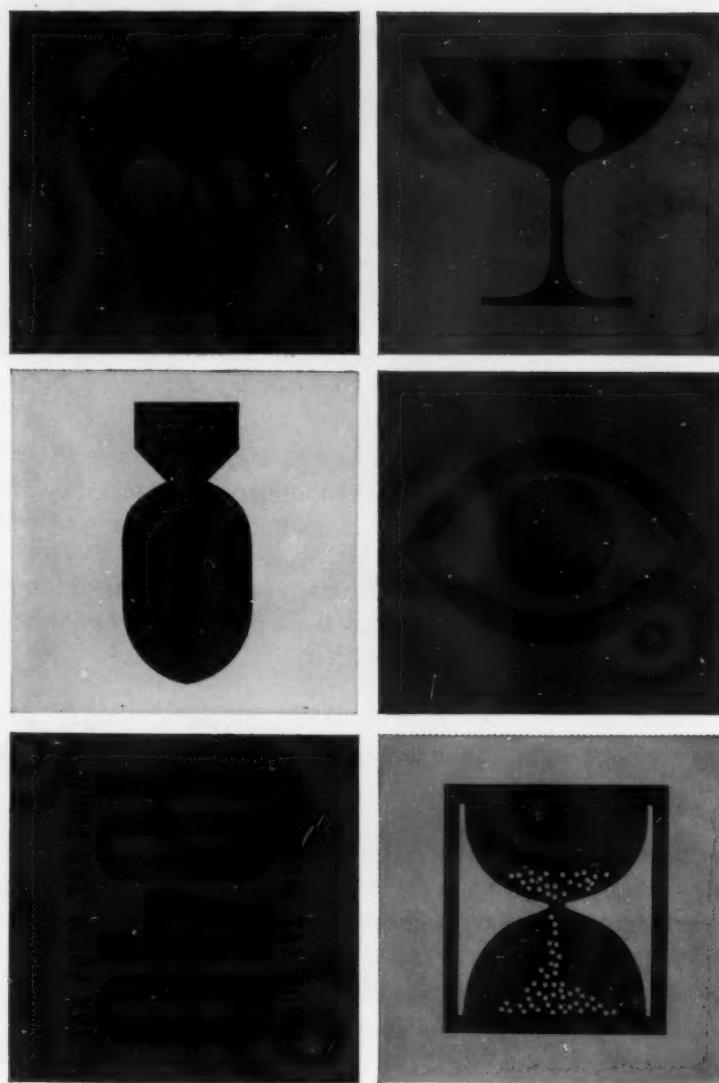
Robert A. Hardt, President

P.S.: Physicians who prefer generic names prescribe "Hydroxyphenamate, Armour."

LISTICA—Hydroxyphenamate, Armour. ©1961, A.P. CO. *Stedman's Medical Dictionary.

ANNOUNCING THE FIRST

Symbols of the Age of Tension/Anxiety



LISTICA by ARMOUR



**allays TENSION/ANXIETY...
maintains acuity... promotes eunoia*...
facilitates somatic diagnosis and therapy**

SELECTIVE TENSITROPIC LISTICA®

lifts the facade of tension/anxiety New Listica allays tension/anxiety in as many as 89% of cases,²⁻¹³ by selectively inhibiting impulses through internuncial pathways of the central nervous system. Whether the patient's tension/anxiety is psychosomatic or a complication of somatic disorder, Listica reduces or eliminates the excess impulsivity seen in tension/anxiety states.

maintains normal acuity Unlike many drugs, Listica does not affect unconditioned response or normal motor activity. Thus, Listica allays tension and anxiety without inducing apathy or impairing acuity; patients are able to pursue normal activities, such as driving, reading, writing, etc., without interference from drug therapy.

enhances physician-patient rapport As it removes tension/anxiety, fear and frustration, **LISTICA PROMOTES EUNOIA**—"a normal mental state." It bares the patient's true somatic condition, and facilitates diagnosis and therapy. Patients are more tractable to concomitant drug therapy, respond better, faster.

without known toxicity or contraindications Listica is safe, as well as effective. Chronic studies¹⁴ in rats (12 months) and dogs (6 months) were free of toxic manifestations at oral dosage levels as high as 200 mg./kg./day (approximately 10 times the recommended human dosage). No macroscopic or microscopic changes in tissues, organs or blood indicative of toxicity were observed, even at doses up to 320 mg./kg. In humans, there have been no adverse blood, urine or cardiac changes; liver profiles were negative, and jaundice has not been noted.

without serious side effects or habituation During three and one-half years of clinical study in 1,759 patients,²⁻¹³ Listica has produced no serious side effects. Less than 4% of patients experienced any side effects, and these were invariably minor and transient. Most frequent (38 cases) was mild drowsiness, which disappeared after the first few days of Listica therapy. Habituation, cumulative effects, or withdrawal symptoms have not been noted, even in patients taking Listica as long as two years.

with convenient dosage and availability One Listica tablet, q.i.d., is the recommended dosage. Listica is supplied in bottles of 50 tablets on prescription only, by pharmacies everywhere. Each tablet contains 200 mg. of Hydroxyphenamate, Armour.

References:

- ¹Bastian, J. W.: Classification of CNS Drugs by a Mouse Screening Battery. To be published in Intern. Arch. de Pharmacodynamie; ²Hubata, J. A., and Hecht, R. A.: Review of Clinical Use of Hydroxyphenamate (Listica) in 1,759 Patients. To be published in Clinical Medicine; ³Taub, S. J.: Management of Anxiety in Allergic Disorders—New Approach. To be published in Psychosomatics; ⁴Cahn, B.: Experience with a New Tranquillizing Agent (Hydroxyphenamate). *Ibid.*; ⁵Davis, O. F.: On Use of Hydroxyphenamate in Anxiety Associated with Somatic Disease. To be published; ⁶Alexander, L.: Effect of Hydroxyphenamate on Conditional Psychogalvanic Reflex in Man. Supplement to Diseases of the Nervous System, Sept., 1961; ⁷Cahn, B.: Effect of Hydroxyphenamate in Treatment of Mild and Moderate Anxiety States. *Ibid.*; ⁸Cahn, M. M., and Levy, E. J.: Use of Hydroxyphenamate (Listica) in Dermatological Therapy. *Ibid.*; ⁹Eisenberg, B. C.: Amelioration of Allergic Symptoms with a New Tranquillizer Drug (Listica). *Ibid.*; ¹⁰Friedman, A. P.: Pharmacological Approach to Treatment of Headache. *Ibid.*; ¹¹Greenspan, E. B.: Use of Hydroxyphenamate in Some Forms of Cardiovascular Disease. *Ibid.*; ¹²Gouldman, C., Lunde, F., and Davis, J.: Clinical Trial of Hydroxyphenamate in Alcoholic Patients. *Ibid.*; ¹³McLaughlin, B. E., Harris, J., and Ryan, E.: Double Blind Study Involving "Listica," Clordiazepoxide, and "Placebo" as Adjunct to Supportive Psychotherapy in Psychiatric Clinic. *Ibid.*; ¹⁴Bastian, J. W.: Pharmacology and Toxicology of Hydroxyphenamate. *Ibid.*; ¹⁵Bossinger, C. D.: Chemistry of Hydroxyphenamate. *Ibid.*

ARMOUR PHARMACEUTICAL COMPANY, KANKAKEE, ILLINOIS
Physicians who prefer generic names prescribe hydroxyphenamate.

LISTICA—Hydroxyphenamate, Armour. © 1961, A.P. CO. • Stedman's Medical Dictionary

Mediquiz

Concluded from page 93a

9. Anemic crises in chronic hemolytic disorders are most often due to:

- A) Increased destruction of erythrocytes by the extrasplenic reticulo-endothelial system.
- B) Occult bleeding.
- C) Increased splenic destruction of erythrocytes.
- D) An exhaustion of marrow elements.
- E) A circulating hemolysin.

10. Clubbing of the fingers does *not* occur in:

- A) Biliary cirrhosis.
- B) Chronic amebic dysentery.
- C) Carcinoma of the cecum.
- D) Oat cell carcinoma.
- E) Ulcerative colitis.

11. Splenomegaly is an expected accompaniment of jaundice in all of the following conditions *except*:

- A) Hanot's cirrhosis.
- B) Weil's disease.
- C) Postnecrotic cirrhosis.
- D) Luetic hepatitis.
- E) Infectious mononucleosis.

12. Other factors being equal, axonal regeneration of a severed peripheral nerve in the extremities proceeds most rapidly in the:

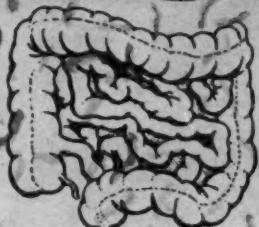
- A) Hand and foot.
- B) Regions about the elbow and knee.
- C) Forearm and lower leg.
- D) Upper parts of the arm and thigh.
- E) Fingers and toes.

prevent and clear up
antibiotic-caused diarrhea

new!

Bacid[®]

capsules



13. A streptococcus viridans endocarditis in an edentulous patient is:

- A) An occurrence of more than normal frequency.
- B) Suggestive of a salivary gland abscess.
- C) An unusual occurrence.
- D) An occurrence of normal frequency.
- E) Known to run a rapidly fatal course.

14. A pressor response ten minutes after intravenous histamine is probably due to:

- A) Zuckerkandl's adenoma.
- B) Gastric activity.
- C) Pheochromocytoma.
- D) Histamine headache.
- E) Cushing's syndrome.

15. An abnormally high cerebrospinal fluid protein occurs in:

- A) Rheumatoid spondylitis.
- B) Peutz-Jaeger syndrome.
- C) Ellison-Zollinger syndrome.

D) Ochronosis.

E) Primary amyloidosis.

16. An unfavorable sign during the course of active tuberculosis is:

- A) The appearance of cryoglobulins.
- B) An increase in red cell fragility.
- C) A fall in serum calcium.
- D) Progressive lymphocytosis.
- E) Increasing monocytosis.

(Answers on Page 234a)

WANTED: MEDQUIZ® QUESTIONS

Want to try your hand at preparing questions for MEDICAL TIMES Mediquiz? If you are interested, write for information to American Public Health Association, Professional Examination Service, Attention: Mrs. Ruth Shaper, 1790 Broadway, New York City 19, New York. You will receive payment for each question accepted for Mediquiz.

Bacid

the highest available potency of viable L. acidophilus (a specially cultured human strain) with 100 mg. of sodium carboxymethylcellulose per capsule.

use BACID with every antibiotic Rx for effective antidiarrheal protection.

BACID acts to re-implant billions of friendly Lactobacillus acidophilus in the intestinal tract. This serves to create an aciduric flora hostile to the growth of putrefactive bacteria and antibiotic-resistant pathogens. BACID is most useful to help prevent and overcome diarrhea, flatulence, perianal itching and other symptoms due to antibiotics, etc. Also valuable in functional constipation, irritable colon, diverticulitis.

completely non-toxic — physiologic BACID is safe and well tolerated in many times the suggested dosage (2 capsules, two to four times a day, preferably with milk).

Bottles of 50 and 100 capsules.

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U. S. VITAMIN & PHARMACEUTICAL CORPORATION

Arlington-Funk Laboratories, division
250 East 43rd Street, New York 17, N.Y.

✓ from depression to the right frame of mind



✓ continuous, 24-hour cerebral oxygenation for the aging patient. By stimulating respiratory and circulatory function, GERONIAZOL TT* relieves mental confusion, depression, anxiety, and emotional instability—frequent problems in patients after forty—due to presenile changes in the vasculature of the brain. Notable benefit usually is seen within one to three weeks of therapy. It improves appetite, sleep pattern, and outlook—and GERONIAZOL TT* is non-hypertensive, non-excitatory.

Neither a tranquilizer nor a psychic energizer, GERONIAZOL TT* provides a physiologic stimulation of the cerebrum to permit the patient to adjust to his surroundings, become part of life itself again—and attain the right frame of mind.

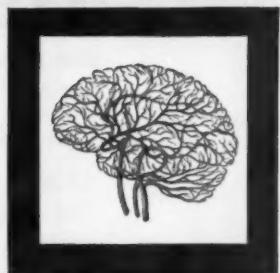
References: 1. Curran, T. R., and Phelps, D. K.: Am. Pract. & Dig. Treat. 11: 617, 1960.
2. Levy, S.: J.A.M.A. 159: 1260, 1953. 3. Connolly, R.: W. Va. Med. J. 56: 268, 1960.

GERONIAZOL® TT*

*TEMPOTROL® (Time Controlled Therapy)



PHILIPS ROXANE, INC. Columbus 16, Ohio



Each TEMPOTROL contains:
Pentylenetetrazol, 300 mg.; and
Nicotinic Acid, 150 mg.

Indications: Respiratory and circulatory stimulant for the aged and debilitated with symptoms of mental confusion, depression, anxiety or arteriosclerotic psychosis.

Contraindications: None known in recommended dosage.

Dosage: One GERONIAZOL TT* tablet, b.i.d.

Supplied: Bottles of 42 tablets (3 weeks' treatment).

**STOPS THE ASTHMA ATTACK
IN MINUTES...FOR HOURS..
ORALLY**

ELIXOPHYLLIN®

RAPID RELIEF IN MINUTES—in 15 minutes^{1,2,3} mean theophylline blood levels are comparable to I.V. aminophylline—so that severe attacks have been terminated in 10 to 30 minutes.^{1,4,5,6} Note: With Elixophyllin the patient can learn to abort an attack in its incipient stage.

INHERENT SUSTAINED ACTION—After absorption theophylline is slowly eliminated during a 9-hour period.⁷ Clinically proved relief and protection day and night with t.i.d. dosage.^{1,3-6,8,9}

NO UNNEEDED SIDE EFFECTS—Since Elixophyllin does not need "auxiliaries," it contains no ephedrine—no barbiturate—no iodide—no steroid. *Gastric distress is rarely encountered.*^{8,9}



Each tablespoonful (15 cc.) contains theophylline 80 mg. (equivalent to 100 mg. aminophylline) in a hydroalcoholic vehicle (alcohol 20%).

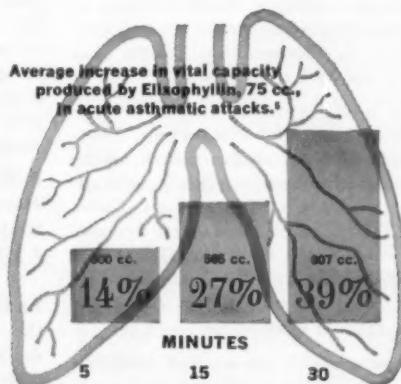
ACUTE ATTACKS:

single dose of 75 cc. for adults; 0.5 cc. per lb. of body weight for children.

24 HOUR CONTROL:

for adults 45 cc. doses before breakfast, at 3 P.M., and before retiring; after two days, 30 cc. doses. Children, first 6 doses 0.3 cc.—then 0.2 cc. per lb. of body weight as above.

Average increase in vital capacity produced by Elixophyllin, 75 cc., in acute asthmatic attacks.¹



REFERENCES: 1. Kessler, F.: Connecticut M.J. 27:205 (March) 1957. 2. Schlegel, J.; McGinn, J.T., and Hennessy, D.J.: Am. J. Med. Sci. 233:296 (March) 1957. 3. Kessler, F.: Med. Times (Oct.) 1959. 4. Burbank, B.; Schlegel, J., and McGinn, J.: Am. J. Med. Sci. 284:28 (July) 1957. 5. Spielman, A.D.: Ann. Allergy 15:270 (June) 1957. 6. Greenbaum, J., and Murray, R.A.: Ann. Allergy 15:270 (June) 1957. 7. Waxman, S.H., and Shatz, A.: J.A.M.A. 149:746 (1954). 8. Burgeon, H.A., and Bassett, A.E., in *Manual of Medicine*, 1961. 9. Wilhelmi, R.E., Conn, H.F.: In *Current Therapy—1961*, Philadelphia, W.B. Saunders Company, p. 417.

Patent Pending

Reprints on request

Sherman Laboratories
Detroit 11, Michigan

*the first comprehensive
regulator of
female cyclic function*

ENOVID®

(brand of norethynodrel with ethynodiol 3-methyl ether)

THE BASIC ACTION

ENOVID closely mimics the balanced progestational-estrogenic action of the functioning corpus luteum. This action is readily understood by a simple comparison. In effect, ENOVID induces a physiologic state which simulates early pregnancy—*except that there is no placenta or fetus*. Thus, as in pregnancy, the production or release of pituitary gonadotropin is inhibited and ovulation suspended; a pseudodecidual endometrium ("pseudo" because neither placenta nor fetus is present) is induced and maintained.

Further, during ENOVID therapy, certain symptoms typical of normal pregnancy may be noted in some patients, such as nausea—which is usually mild and disappears spontaneously within a few days—breast engorgement, some degree of fluid retention, and often a marked sense of well-being. There is no androgenicity. ENOVID is as safe as the normal state of pregnancy.

THE BASIC APPLICATIONS

1. Correction of menstrual dysfunction. Emergency treatment of severe dysfunctional uterine bleeding is promptly effective following the administration of ENOVID in larger doses. Cyclic therapy with ENOVID controls less severe dysfunctional uterine bleeding. In amenorrhea cyclic therapy with ENOVID establishes a pseudodecidual endometrium providing the patient has endometrial tissue capable of response.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered cyclically, beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility. When ENOVID is prescribed for this cyclic use over prolonged periods, a total of twenty-four months should not be exceeded until continuing studies indicate that its present lack of undesired actions continues for even longer intervals. Such studies are now in their seventh year and will regularly be reviewed for extension of the present recommendation.



...unfettered

3. Adjustment of the menses for reasons of health (impending hospitalization for surgery, during treatment of Bartholin's gland cysts, acute urethritis, rectal abscess, trichomonial or monilial vaginitis), or other special circumstances considered valid in the opinion of the physician. For this purpose ENOVID may be started at any time in the cycle up to one week before expected menstruation. Upon discontinuation, normal cyclic bleeding occurs in three to five days.

4. Endometriosis. Continuous therapy with ENOVID corrects endometriosis by producing a pseudodecidual reaction with subsequent absorption of aberrant endometrial tissue.

5. Threatened and habitual abortion. ENOVID should be used as emergency treatment in threatened abortion although symptoms may occur too late to be reversible. Continuous therapy with ENOVID in habitual abortion is based on the physiology of pregnancy. ENOVID provides balanced hormone support of the endometrium, permitting continuation of pregnancy when endogenous support is otherwise inadequate.

6. Endocrine infertility. ENOVID has been used successfully in cyclic therapy of endocrine infertility, promoting subsequent pregnancy through a probable "rebound" phenomenon.

THE BASIC DOSAGE

Basic dosage of ENOVID is 5 mg. daily in cyclic therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in the emergency treatment of dysfunctional uterine bleeding and threatened abortion.

ENOVID is available in tablets of 5 mg. and 10 mg. Literature and references, covering more than six years of intensive clinical study, available on request.

SEARLE

Research in the Service of Medicine



MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals which are not yet listed in the various reference books, can be pasted on file cards. This file can be kept by the physician for ready reference.

Blephamide Ophthalmic Liquifilm, Allergan

INDICATIONS: For the treatment of seborheic and staphylococcal blepharitis.

DESCRIPTION: Contains sodium sulfacetamide, 10.0%; prednisolone acetate, 0.2%; phenylephrine HCl, 0.12%. The Liquifilm vehicle is polyvinyl alcohol; polysorbate 80 (buffered to a pH of 6.8).

DOSAGE: Two to four times daily, depending upon the severity of the condition.

SUPPLY: Five-cc. plastic dropper bottles.

DBI-TD Capsules, U.S. Vitamin

INDICATIONS: For management of diabetes mellitus, stable adult diabetes, sulfonylurea failures, and as an adjunct to exogenous insulin in ketosis-prone unstable (brittle) diabetes in adults and children.

DESCRIPTION: Timed-disintegration, sustained-action hypoglycemic agent. Each capsule provides 50 mg. of Phenformin HCl.

DOSAGE: One capsule daily, usually with breakfast; when higher dosages are needed a second capsule is given with the evening meal, and, if needed, a further increment at intervals of one week is added to either the a.m. or p.m. dose.

SUPPLY: Bottles of 100 and 1000.

Fero-Gradumet, Abbott

INDICATIONS: For the treatment of iron-deficiency anemias.

(VOL. 89, NO. 11) NOVEMBER 1961

DESCRIPTION: Each tablet contains ferrous sulfate, U.S.P., 525 mg. (elemental iron, 105 mg.) in controlled release form.

DOSAGE: One tablet daily. Unusually severe cases may require more than one.

SUPPLY: Bottles of 100 and 1000.

Iberet, Abbott

INDICATIONS: For the treatment of iron-deficiency and nutritional anemias.

DESCRIPTION: Each tablet contains ferrous sulfate—in controlled release form—U.S.P., 525 mg. (elemental iron, 105 mg.) Cobalamin, 25 mcg.; thiamine mononitrate, 6 mg.; riboflavin, 6 mg.; nicotinamide, 30 mg.; pyridoxine HCl, 5 mg.; calcium pantothenate, 10 mg.; ascorbic acid, 150 mg.

DOSAGE: One tablet daily. In unusually severe cases, more than one may be necessary.

SUPPLY: Bottles of 60 and 500.

Lubasporin, Burroughs Wellcome

INDICATIONS: For lubricating urological and gynecological instruments. To prevent infection in catheterization, cystoscopy, dilation, transurethral procedures, sterile pelvic examination, vaginal surgery.

DESCRIPTION: Each Gm. contains Aerospordin brand Polymyxin B sulfate, 5,000 units; benzalkonium chloride, 330 mcg.; methycellulose, propylene glycol, glycerin, disodium versenate and purified water.

Continued on page 107a

busy
pathogens
are
susceptible
to

RAPID RESPONSE—Tao provides a rapid and decisive response in a wide range of common bacterial infections due to many Gram-positive and some Gram-negative bacteria. And after four years of clinical experience, Tao continues to be effective against many resistant staphylococci. That's why

YOU CAN COUNT ON

TAO®
triacytoloandomycin



MEDICAL TIMES

PATHOGENS

TAO
IN VIVO
ACTIVITY

Staphylococci
Streptococci
Pneumococci
Gonococci
H. influenzae

TAO
*IN VITRO
ACTIVITY REPORTED

Meningococci
Listeria monocytogenes
Erysipelothrix rhusiopathiae
Corynebacterium diphtheriae
Clostridium species
Bacillus subtilis
Bacillus anthracis
Brucella species

TAO
*DEMONSTRATED IN
LIMITED REPORTS

Klebsiella pneumoniae
Ps. aeruginosa
H. catarrhalis

TAO
*DEMONSTRATED IN
PROTECTIVE STUDIES

Rickettsia
Psittacosis virus
Lymphogranuloma inguinale virus
Protozoa
(notably amebae)

these busy pathogens
often cause these
commonly seen infections

INFECTIONS

otitis media • acute URI • sinusitis • tonsillitis • pharyngitis • laryngitis • bronchitis •
lobar & bronchopneumonia • bronchiectasis • lung abscess • furuncles • otitis externa
• carbuncles • impetigo contagiosa • ecthyma • acne vulgaris • infected cysts •
abscesses • infected contact dermatitis • infected eczema • other pyoderma • cellulitis
• infected traumatic or surgical ulcers and wounds • pyelonephritis • pyelitis •
ureteritis • cystitis • urethritis (including acute gonococcal) • acute salpingitis • endometritis
• bartholinitis • osteomyelitis • staphylococcal enterocolitis • septic arthritis

*These reports of antimicrobial activity represent experimental data and are
not considered to be clinical indications for the use of triacetyloleandomycin.

A FOUR YEAR RECORD OF

SAFETY—Tao is exceptionally well tolerated. No serious toxic reactions have been encountered in the recommended dosage. Allergic reactions are infrequent and seldom severe. Available as Tao Capsules, 250 and 125 mg.; Ready Mixed Oral Suspension, 125 mg. per 5 cc.; Pediatric Drops, 100 mg. per cc. of reconstituted liquid; Intramuscular or

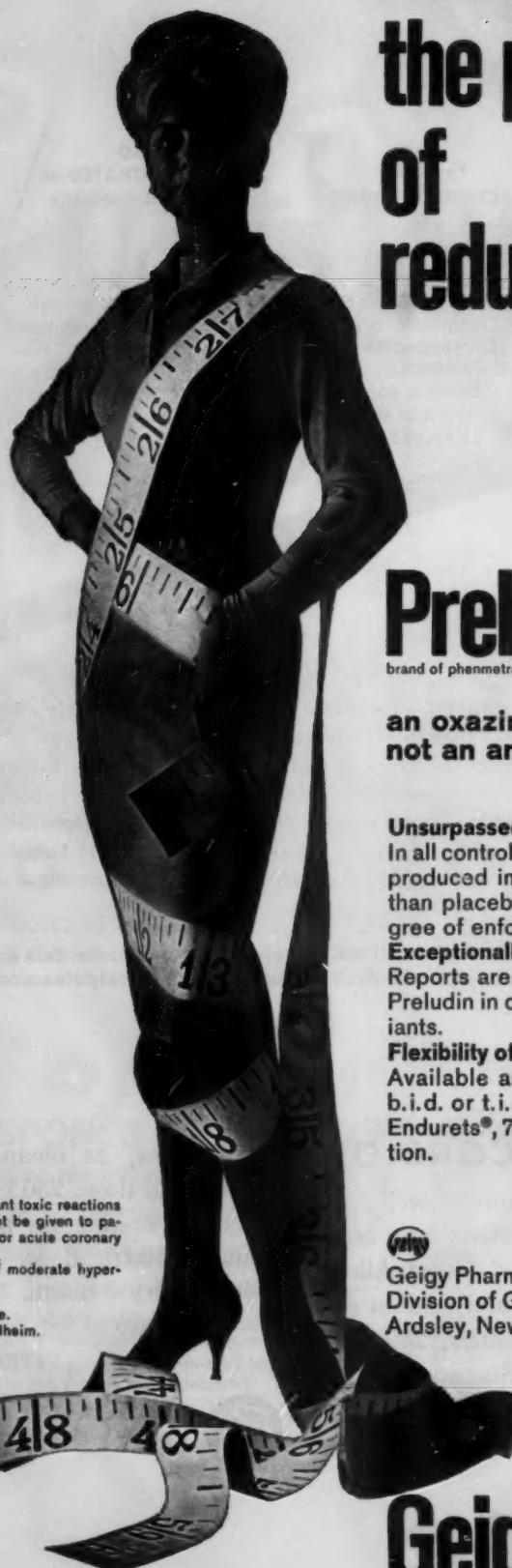
Intravenous, as oleandomycin phosphate. Usual adult dose: 250 to 500 mg., four times daily, depending on severity of infection. Usual pediatric dose: 3 to 5 mg./lb. body weight every 6 hours.

NEW TASTY TAO ORAL SUSPENSION
Ready Mixed • Raspberry Flavored • For Pediatric Use
And for nutritional support **VITERRA® Vitamins and Minerals**
formulated from Pfizer's line of fine pharmaceutical products



New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

reducing the problems of reducing



Preludin®

brand of phenmetrazine HCl

Tablets and
Endurets®
prolonged-action tablets

an oxazine...
not an amphetamine

Unsurpassed Effectiveness

In all controlled clinical studies, Preludin has produced impressively greater weight loss than placebo tablets regardless of the degree of enforcement of dietary restriction.

Exceptionally High Tolerance

Reports are numerous of successful use of Preludin in cases intolerant of other anorexiants.

Flexibility of Dosage

Available as scored tablets of 25 mg. for b.i.d. or t.i.d. administration and also as Endurets®, 75 mg., for once daily administration.

Precautions and Contraindications

Although there have been no reports of significant toxic reactions to Preludin, on theoretical grounds it should not be given to patients with severe hypertension, thyrotoxicosis or acute coronary disease.

Preludin may be used with caution in cases of moderate hypertension and cardiac decompensation.

Preludin®, brand of phenmetrazine hydrochloride.
Under license from C. H. Boehringer Sohn, Ingelheim.



Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

DOSAGE: Using a sterilized applicator tip, express the desired amount into the urethra, thirty to sixty seconds later the remainder of the tube may be applied to the catheter or instrument before completing the procedure. Also apply to a sterile gauze for application to the catheter or instrument.

SUPPLY: Carton of twelve, five-Gm tubes.

Marax Syrup, J. B. Roerig

INDICATIONS: New dosage form to control bronchospastic disorders and allied conditions.

DESCRIPTION: A teaspoonful of syrup contains 2.5 mg. of hydroxyzine HCl; 6.25 mg. of ephedrine sulfate; and 32.5 mg. of theophylline.

DOSAGE: In general, an adult dose of four teaspoons, two to four times daily. Some patients are controlled adequately with two to four teaspoons at bedtime. Interval between doses should not be shorter than four hours.

SUPPLY: One-pint bottles.

Noscomel Compound, Squibb

INDICATIONS: For the suppression of coughs caused by colds or allergic conditions.

DESCRIPTION: Each 5 cc. contains noscapine, 10 mg.; chlorpheniramine maleate, 0.66 mg.; phenylephrine HCl, 1.66 mg.; ammonium chloride, 50 mg.; menthol, 0.25 mg.

DOSAGE: Adults—Two teaspoonfuls three to four times daily. Children six to twelve years—One teaspoonful three to four times daily.

SUPPLY: Three oz. bottles.

Paladac with Minerals, Parke, Davis

INDICATIONS: For the prevention of certain vitamin deficiencies and to supplement mineral intake.

DESCRIPTION: Each tablet contains vitamins A, D, C, E, B₁, B₂, B₆, B₁₂, nicotinamide and

pantothenic acid. Minerals include iron, calcium, phosphorus, iodine, potassium and magnesium.

DOSAGE: One tablet daily or as directed by physician.

SUPPLY: Bottles of 30 and 100.

Robanul & Robanul-PH Tablets, A. H. Robins

INDICATIONS: Anticholinergic. For the management of duodenal and gastric ulcer.

DESCRIPTION: *Robanul*—Each pink tablet contains 1 mg. glycopyrrolate; *Robanul-PH*—Each blue tablet contains 1 mg. glycopyrrolate and ¼ gr. phenobarbital.

DOSAGE: One tablet three times a day (morning, early afternoon, and at bedtime).

SUPPLY: *Robanul*—Bottles of 100 and 500. *Robanul-PH*—Bottles of 100 and 500.

Sinutab with Codeine, Warner-Chilcott

INDICATIONS: For relief of severe and persistent headaches associated with allergic or vasomotor rhinitis, sinusitis, and tension states.

DESCRIPTION: Contains Sinutab (acetaminophen, 150 mg.; acetophenetidin, 150 mg.; phenylpropanolamine HCl, 25 mg.; phenyltoloxamine citrate, 22 mg.) with codeine phosphate, 15 mg.

DOSAGE: Two tablets initially, followed by one or two tablets every four hours.

SUPPLY: Bottles of twenty-four.

Tain Oral Suspension, Dorsey

INDICATIONS: For the symptomatic relief of the common cold and the prevention of secondary complications due to susceptible organisms.

DESCRIPTION: Each teaspoonful contains triacetyloleandomycin, 125 mg.; Triaminic, 25 mg.; (phenylpropanolamine HCl, 12.5 mg., pyrilamine maleate, 6.25 mg.; pheniramine maleate, 6.25 mg.); acetaminophen, 150

Concluded on page 116a

*for psoriasis—especially in intertriginous areas
in view of the importance of the
skin-drug-vehicle relationship, we are pleased
to announce the availability of*

ALPHOSYL® LUBRICATING CREAM

THE CLINICALLY PROVEN ALPHOSYL FORMULA IN
A PHARMACOLOGICALLY IMPROVED CREAM BASE



NEW! ALPHOSYL LUBRICATING CREAM
*for psoriatic plaques — especially in
intertriginous areas — in a base
that simulates natural skin lipids!*

OFTEN CLEARS PSORIATIC LESIONS—ESPECIALLY IN INTERTRIGINOUS AREAS! The most distressing location for psoriatic plaques is often in intertriginous areas¹—areas where dry, scaly lesions cause constant friction, continuous irritation. The introduction of Alphosyl Lubricating Cream is significant, because it is of particular value in the dry, extremely scaly psoriatic lesions—especially in these intertriginous areas.² It not only helps remove scales, but it enhances lubrication of the skin folds to lessen irritation—has proved effective even in resistant cases. In a recent clinical study² of 96 psoriatics, 73 patients experienced 75 to 100% clearing, while 15 had from 50 to 75% clearing with Alphosyl Lubricating Cream.

AN IMPORTANT NEW BASE THAT SIMULATES NORMAL SKIN LIPIDS! Alphosyl Lubricating Cream is formulated in a unique vehicle that enhances lubrication and moisture retention. The base consists of a combination of saturated and unsaturated free fatty acids, naturally occurring triglycerides, sterols and esters resembling the lipid constituents of normal healthy skin. It also contains hydrophilic-lipophilic bipolar substances which enhance the "wettability" or moisture uptake and retention of the amphoteric proteins of the stratum corneum.² It has been shown that squalane, one of the ingredients of the base, is most effective in dissolving a cement substance in psoriatic scale.

SUPPLIED: In tubes of 60 Gm. APPLICATION: Rub well into lesions 2 to 4 times daily, or as required.

ACTIVE INGREDIENTS: Allantoin 2% and special coal tar extract (Tarbonis®) 5%.

NOTE: Alphosyl Lotion and Alphosyl HC (lotion with 0.25% hydrocortisone) are, of course, available for your routine prescription. The Lotion is especially recommended for psoriasis of the scalp—Alphosyl HC, whenever inflammation is present.

REFERENCES: 1. Michelson, H. E.: Arch. Dermat. 78:9, 1958.
2. Bleiberg, J.: Clin. Med. 8:1724 (Sept.) 1961.

 REED & CARNICK / Kenilworth, New Jersey



How Ismelin can benefit the hospitalized "hard case" hypertensive

Ismelin lowers diastolic as well as systolic blood pressure — even in severe or refractory hypertension: Because of its pronounced antihypertensive activity and relative freedom from troublesome side effects, Ismelin is particularly valuable therapy for hospitalized hypertensive patients. Typically, these patients are "hard cases"—those refractory to the usual office treatment or those who neglected to seek treatment until hypertension reached the severe stage. In many such patients, Ismelin has brought both diastolic and systolic blood pressure down to normotensive or near-normotensive levels. And this has been accomplished with less of the side-effects problem of other potent antihypertensive agents, such as ganglionic blockers.

Clinical reports confirm the benefits of Ismelin: "Its action [Ismelin] is apparently steady; tolerance does not develop; and out-patient care of cases is relatively easy."¹

"The use of this extremely potent drug led in all cases, which were treated both in hospital and on an ambulatory basis, to a clear-cut reduction in blood pressure, often to normal levels."²

"Notably absent were the constipation, paresis of visual accommodation, and dry mouth characteristic of the parasympatholytic effects of ganglion blocking drugs."³

References: 1. Evanson, J. M., and Sears, H. T. N.: Lancet 2:387 (Aug. 20) 1960. 2. Jaquierod, R., and Spühler, O.: Schweiz. med. Wochenschr. 90:113 (Jan. 30) 1960 (translation). 3. Richardson, D. W., and Wysoski, E. M.: Virginia M. Month. 86:377 (July) 1959.

For complete information about Ismelin (including dosage, cautions, and side effects), see current Physicians' Desk Reference or write CIBA, Summit, N. J.

Supplied: Tablets, 10 mg. (pale yellow, scored) and 25 mg. (white, scored).

/2997HS-1

ISMELIN® sulfate (guanethidine sulfate CIBA)

diastolic
down

Ismelin[®]

C I B A Summit, N. J.

because
DIABETES IS FOR LIFE
start with Diabinese®

BRAND OF CHLORPROPAMIDE

*for maximum assurance
of continuing success
with oral therapy*

*long-term use continues to
demonstrate that DIABINESE*

has a comparatively low incidence of secondary failures.

provides maximum convenience and economy because of
once-a-day oral administration.

at presently recommended dosage has a low incidence of adverse
effects which require discontinuance of therapy. See "In Brief."



when more than "diet alone" is needed by the maturity-onset diabetic

start with



Diabinese®

BRAND OF CHLORPROPAMIDE

*the oral antidiabetic
most likely to succeed*

economical once-a-day dosage

IN BRIEF

DIABINESE, a potent sulfonylurea, provides smooth, long-lasting control of blood sugar permitting economy and simplicity of low, once-a-day dosage. Moreover, DIABINESE often works where other agents have failed to give satisfactory control.

INDICATIONS: Uncomplicated diabetes mellitus of stable, mild or moderately severe nonketotic, maturity-onset type. Certain "brittle" patients may be helped to smoother control with reduced insulin requirements.

ADMINISTRATION AND DOSAGE: Familiarity with criteria for patient selection, continued close medical supervision, and observance by the patient of good dietary and hygienic habits are essential.

As with insulin, DIABINESE dosage must be regulated to individual patient requirements. Average maintenance dosage is 100-500 mg. daily. For most patients the recommended starting dose is 250 mg. given once daily. Geriatric patients should be started on 100-125 mg. daily. A priming dose is not necessary and should not be used; most patients should be maintained on 500 mg. or less daily. Maintenance dosage above 750 mg. should be avoided. Before initiating therapy, consult complete dosage information.

SIDE EFFECTS: In the main, side effects, e.g., hypoglycemia, gastrointestinal intolerance, and neurologic reactions, are related to dosage. They are not encountered frequently on presently recommended low dosage. There have been, however, occasional cases of jaundice and skin eruptions primarily due to drug sensitivity; other side effects which may be idiosyncratic are occasional diarrhea (sometimes sanguineous) and hematologic reactions. Since sensitivity reactions usually occur within the first six weeks of therapy, a time when the patient is under very close supervision, they may be readily detected. Should sensitivity reactions be detected, DIABINESE should be discontinued.

PRECAUTIONS AND CONTRAINDICATIONS: If hypoglycemia is encountered, the patient must be observed and treated continuously as necessary, usually 3-5 days, since DIABINESE is not significantly metabolized and is excreted slowly. DIABINESE as the sole agent is not indicated in juvenile diabetes mellitus and unstable or severely "brittle" diabetes mellitus of the adult type. Contraindicated in patients with hepatic dysfunction and in diabetes complicated by ketosis, acidosis, diabetic coma, fever, severe trauma, gangrene, Raynaud's disease, or severe impairment of renal or thyroid function.

DIABINESE may prolong the activity of barbiturates. An effect like that of disulfiram has been noted when patients on DIABINESE drink alcoholic beverages.

SUPPLIED: As 100 mg. and 250 mg. scored chlorpropamide tablets.

More detailed professional information available on request.

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when anxiety and tension aggravate pain



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(Ethoheptazine Citrate with Acetylsalicylic Acid, Wyeth)

Relieves pain, relaxes mind and muscle

- analgesic action to relieve pain
- calming action to relieve anxiety
- muscle-relaxant action to relieve spasm and tension

EQUAGESIC RELIEVES PAIN AND ANXIETY

For your patients suffering pain accompanied by anxiety and tension, EQUAGESIC provides gratifying relief. Potent, non-narcotic analgesia is provided by a combination of the potent analgesic, ethoheptazine citrate, with time-proved aspirin. The muscle-relaxant and anti-anxiety effects of meprobamate, coupled with the analgesic agents provide *analgesia in depth*.

These effective agents relieve the painful anxiety and tension of patients suffering from strains, sprains, muscle tension and other musculoskeletal conditions. The comforting pain relief afforded by EQUAGESIC is rarely hampered by side effects.^{1,2}

Satisfactory Pain Relief in 97% of patients with painful musculoskeletal conditions. In a study¹ of 106 patients suffering musculoskeletal pain associated with anxiety and muscle spasm, EQUAGESIC "... was extraordinarily effective, satisfactory results being obtained in 97% of the patients treated." EQUAGESIC provided effective pain relief for these conditions:

osteoarthritis • bursitis • low back syndrome
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small bones • tension headache

Gratifying Pain Relief in 74% of patients with painful ligament sprains. In a study² of 104 ambulatory cases of acute cervical or lumbar muscle ligament sprain treated with EQUAGESIC, "... control of acute pain was obtained in 74% of the cases." The conditions treated occurred in typical office patients with pain following injuries to the cervical and/or lumbar spine. The author concluded "... EQUAGESIC (Wyeth) is a satisfactory and useful additional tool in the care of the acute injuries due to muscle ligament sprain...."

1. Splitter, S.R.: Current Therapeutic Research 2:169 (June) 1960. 2. Harsha, W.N.: J. Okla. State Med. Assoc. 54:12 (Jan.) 1961.

For further information on limitations, administration and prescribing of EQUAGESIC, see descriptive literature or current Direction Circular.

Wyeth Laboratories • Philadelphia, Pa.



Modern Medicinals

Concluded from page 107a

mg; butylparaben, 0.017%; propylparaben, 0.009%.

DOSAGE: For infants and children—10 mg. per pound of body weight daily in four divided doses. For adults and children—weighing over eighty pounds—two teaspoonfuls four times daily.

SUPPLY: Bottles of eight fl. oz.

Torecan, Sandoz

INDICATIONS: To prevent or control nausea and vomiting in a wide variety of clinical conditions, such as pregnancy, labyrinthine disturbances, inflammatory and non-inflammatory conditions, postoperative nausea and vomiting, radiation and nitrogen mustard therapy, migraine and tension headaches.

DESCRIPTION: Contains thiethylperazine maleate, a phenothiazine compound possessing predominantly antiemetic properties.

DOSAGE: Oral, one tablet, t.i.d. (Range,

two to six tablets per day.) **Intramuscular:** 10 mgms. to 20 mgms. daily.

SUPPLY: Tablets, 10 mgms., bottles of one hundred; Ampuls, 2 cc. (5 mgms./cc.) boxes of twelve and one hundred.

Tylenol Tablets, McNeil

INDICATIONS: For the temporary relief of minor aches and pains of arthritis and rheumatism. Also useful as an analgesic in other painful disorders such as headache, dysmenorrhea, myalgias, and neuralgias.

DESCRIPTION: Each tablet contains Tylenol acetaminophen, 300 mg.

DOSAGE: One to two tablets every four hours. Children six to twelve—one-half to one tablet every four hours. Children under six—a physician should be consulted. No more than four doses should be taken in a twenty-four-hour period nor use contained for more than ten days, unless directed by a physician.

SUPPLY: Bottles of 100.

Vad, 3 Oz. Tube, Walker

INDICATIONS: For diaper rash and other skin irritations—in a 3-oz. tube.

DESCRIPTION: Contains vitamin A, 100,000 USP Units; Vitamin D, 10,000 USP Units, allantoin, 0.10%.

DOSAGE: Apply to affected areas.

SUPPLY: Three oz. tube.

Vi-Daylin Chewable Dulcet, Abbott

INDICATION: Vitamin supplement for children.

DESCRIPTION: Each tablet contains vitamin A, 0.9 mg.; vitagin D, 10 mcg.; thiamine mononitrate, 1.5 mg.; riboflavin, 1.2 mg.; ascorbic acid, 50 mg.; nicotinamide, 10 mg.; cobalamin, 3 mcg.; pyridoxine HCl, 1 mg.

DOSAGE: One tablet daily. Therapeutic doses must be determined by the physician.

SUPPLY: Bottles of 30 and 100.



"It'll make all the other multiple vitamin capsules look sick."

a breathing spell from asthma

Quadrinal*

a rapid way to clear the airway

- stops wheezing
- increases cough effectiveness
- relieves spasm

In chronic disorders associated with obstructed respiration, the dependable antispasmodic and expectorant action of Quadrinal rapidly clears the bronchial tree. Patients breathe more easily and acute episodes of bronchospasm are often eliminated. Quadrinal is well tolerated, even on prolonged administration. The potassium iodide in Quadrinal provides an expectorant of time-tested effectiveness and safety.

Indications : Bronchial asthma, chronic bronchitis, pulmonary fibrosis, pulmonary emphysema.

Quadrinal Tablets, containing ephedrine HCl (24 mg.), phenobarbital (24 mg.), "Phyllcin" (theophylline-calcium salicylate) (130 mg.), and potassium iodide (0.3 Gm.).

Also available—

a new Quadrinal dosage form with taste-appeal for all age groups: fruit-flavored QUADRINAL SUSPENSION (1 teaspoonful = 1/2 Quadrinal Tablet)

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*Quadrinal, Phyllcin®





SUCCESSFUL FAMILY
PLANNING...BASED ON
YOUR COUNSEL AND
LANESTA® GEL

The new baby is beautiful, but his arrival raises some problems in family planning on which the mother will need help — *your* help. What you counsel or suggest to her may determine the family's happiness for many years to come. When she comes in to see you for her routine postnatal check-up, you have an ideal opportunity to counsel her and answer her questions. It's also an ideal time to recommend the use of Lanesta Gel.

Lanesta Gel, with or without a diaphragm, is a most effective means of conception control. Lanesta Gel offers faster spermicidal action because it rapidly diffuses into the seminal clot. In fact, the mean diffusion spermicidal time of Lanesta Gel is three to seven times faster than the mean diffusion times of ten leading commercially available contraceptive creams, gels, or jellies, according to Gamble ("Spermicidal Times of Commercial Contraceptive Materials — 1959").*

Lanesta Gel has complete esthetic acceptance and is well tolerated.

*Gamble, C.J.: Am. Pract. & Digest. Treat. 11:852 (Oct.) 1960. See also Berberian, D.A., and Slighter, R.G.: J.A.M.A. 168:2257 (Dec. 27) 1958; Kaufman, S.A.: Obst. and Gynec. 15:401 (March) 1960; Warner, M.P.: J.A.M.A. Women's A. 14:412 (May) 1959.

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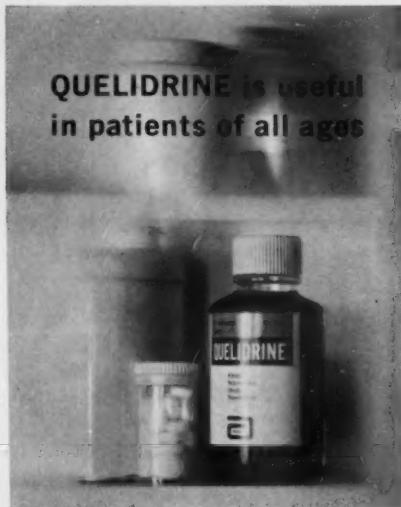
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Quelidrine provides a full range of therapeutic action whenever cough complicates such inflammatory or allergic disorders as the common cold, rhinitis, sinusitis, pharyngitis, tracheitis, bronchitis, laryngitis, asthma, grippe, influenza and pneumonitis.

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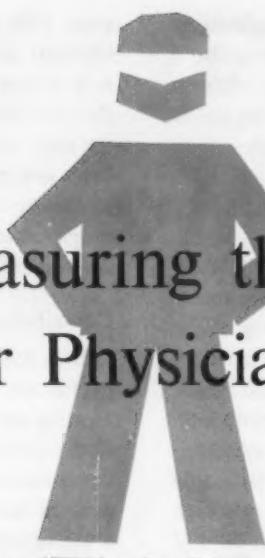
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DEXTROMETHORPHAN HYDROBROMIDE <i>Non-narcotic, non-addicting antitussive</i>	10 mg.
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PHENYLEPHRINE HYDROCHLORIDE <i>Nasal-vasoconstricting decongestant</i>	5 mg.
AMMONIUM CHLORIDE <i>Mucus-thinning expectorant</i>	40 mg.
IPECAC FLUIDEXTRACT <i>Secretion-promoting expectorant</i>	0.005 ml.
ALCOHOL 2%	



Quelidrine—Non-Narcotic, Antihistaminic Cough Suppressant, Abbott

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On Measuring the Need for Physicians

*The Virginians have but few Doctors among them,
and they reckon it among their Blessings,
fancying the Number of their Diseases would
increase with that of their Physicians.*

JOHN OLDMIXON¹

ISIDORE ALTMAN, Ph.D.
Pittsburgh, Pennsylvania

The amount of space currently devoted by scientific journals, newspapers, and other news sources to whether or not we have a sufficient supply of physicians indicates the importance attached to this question. President Kennedy, in his health message of February 9, 1961, recommended a program of scholarships for medical and dental students and grants to the medical and dental schools for expanding teaching facilities, on the ground that "Adequate health care requires an adequate supply of well-trained personnel. We do not have that adequate supply today—and shortages are growing." A committee of distinguished citizens, reporting to the Surgeon

General of the U. S. Public Health Service on the subject of "Physicians for a Growing America," found that "The problem of increasing the supply of medical graduates is urgent."² Two other such committees which reported on medical research, one report being made for the executive branch and the other for the legislative branch of the federal government, gave major consideration to the problem of manpower supply.^{3, 4}

The thesis that a shortage of physicians exists—or, if it does not exist, it soon will—appears now to be generally accepted. Yet how do we know that a shortage exists; that is, how are such things measured? What are the yardsticks that can be applied for the purpose of making such a determination? The intent of this paper is to discuss the factors and the

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kinds of data that should be considered in order to obtain some valid answers. In a second paper, a closer look will be taken at some of the available data on the supply of physicians, with particular interest in the course they seem to be taking.

Trends

The notion that we may be suffering from a shortage of physicians is a relatively recent phenomenon—if times of war, when large numbers of physicians are withdrawn from the civilian population to serve in the armed forces, are not considered. From mid-nineteenth century to a few decades ago, the ratio of physicians to population, the measure ordinarily employed to indicate relative supply, was high by comparison with the ratio today of 132 physicians per 100,000 population. In 1850, it was 176, and in 1900, 157 per 100,000 population.⁵

It is well known that licensure standards during the nineteenth century, where they existed at all, were notoriously feeble; the ranks of the physicians were swelled by poorly trained men and by charlatans and humbugs.⁶

The demise of the many inferior medical schools and diploma mills that flourished in the nineteenth century, a most happy result of the Flexner report to the Carnegie Foundation, sharply cut into the production of new physicians. Numerically at least, the effects of this sudden decline in the production of physicians are still felt in that the total number of physicians in practice today might otherwise be higher (in the older age groups).

The supply of physicians per 100,000 population declined from 157 in 1900 and 146 in 1910 to 137 in 1920 and an all-time low of 125 around 1930. After this date, it increased gradually to a peak of about 135 during World War II. Much of the present concern stems from statistics which show that the ratio of physicians to population is beginning to slide slowly but surely downward from this figure of 135. The increases in medical-school enrollment that have been achieved have not kept

pace with the “population explosion” that a birthrate of about 25 per 1,000 and a death rate of less than 10 per 1,000 are producing. Perrott and Pennell have pointed out that at the rates of production of medical school graduates and influx of foreign physicians estimated by the American Medical Association the ratio of physicians to population in 1975 will be down to 127 per 100,000 population.⁷

Contributing Factors

It is this drop in the ratio of physicians to population which is largely to blame for the growing nervousness about a shortage of physicians. Why we should be preoccupied with the question of a shortage should become evident as some of the factors contributing to it are noted.

The sharp increase in population, factor number one, has just been referred to. According to the recent Census, there were about 180,000,000 people in the United States on April 1, 1960. Should the present growth trend continue, estimates have it that by 1970 the population will have swelled to the once unbelievable figure of 215,000,000; when the year 2000 arrives, there may be 380,000,000 people in this country (provided no major war occurs).⁸

Another factor contributing to apprehension about a shortage is the shift in the types of activities that engage the attention of physicians. An increasing proportion of persons with the M.D. degree are devoting their full energies to research, teaching, public health, and the hospital. The report, “Physicians for a Growing America”⁹ points out that, “In 1930, 1 physician in 16 was serving full time in hospitals, now 1 in 6 (including interns and residents).” In 1931, the number in hospital service was 9,700; in 1957, it was 36,371. “The number of physicians engaged in full-time teaching, research, public health, industrial medicine, military service, and all other activities except private practice and hospital service, has almost quadrupled in the past 30 years. In 1931, 6,400 physicians so reported themselves; in 1957 the number was 23,800.”

While it is true that this trend toward activities other than private practice does not affect the total number of physicians, it seriously reduces the relative numbers available to the public for direct personal care.

Specialists, who constituted 11 percent of all physicians in 1923, made up 39 percent of all physicians in 1955.⁹ If this increasing ratio of specialists to general practitioners means that the service of the specialist are a substitute for the services of the general practitioner, total volume of visits is unaffected, but if they supplement the latter, as to some extent they very likely do, they reflect increased demand and utilization (and a change in the ways of medical practice).

A word of concern may not be out of order here about the supply of new physicians in terms of its quality.

The country is seemingly faced with a steady decline in the ratio of applicants to freshman places in medical schools, as witness these current data:

YEAR	RATIO
1956-57	1.99
1957-58	1.97
1958-59	1.81

Some medical schools are now experiencing empty places in the freshman year.¹⁰ Moreover, "while the ratio of physicians to population has remained fairly stable for the past thirty years, it has been maintained in recent years only by the inclusion of growing numbers of foreign doctors. In 1959, a total of 8,400 doctors from ninety-one countries served in 846 American hospitals, compared with 458 foreign physicians in 1950. The current total of foreign doctors here is more than all the M.D.'s graduated from the nation's eighty-five medical schools last year."¹⁰

Perhaps to make matters worse, the quality of the applicants as a group appears to be slipping a little. The percentage of "A" students admitted in recent years was as follows: 1957-58—17.7; 1958-59—16.0; and 1959-60—15.1. However, the percentages were 15.8 in 1955-56 and 16.1 in 1956-57.¹¹

Shortage and Demand for Services

Concern with the question of a shortage of physicians then would appear to be justified. With respect to its effect on demand, a shortage poses the following problems:

1. If it is assumed that the level of demand for services by patients will remain the same, or will not decrease, there will be increasingly fewer physicians to meet it.

2. With fewer physicians (and with physicians in the main being fully busy), we may have to think more seriously than we have heretofore about newer or other ways of rendering care. Mentioned as possibilities are group practice, hospital-centered practice, and the assignment of greater responsibilities for care of the patient to such other personnel as nurses and technicians.

3. With fewer physicians relative to population and a high demand for services, there is the strong possibility that quality of care may suffer. Treatment may be hurried if physicians find themselves pressed by crowded waiting rooms.

4. A reduced supply of physicians may drive the cost of medical services upward. As a defensive measure against pressures from patients, physicians may resort to raising their fees. This would simply be an application of the law of supply and demand.

Actually, it makes little sense to suppose that demand will lessen to any significant degree when such indicators as we have point rather to its increase. For one thing, available studies show that the average number of visits to the physician has been rising steadily. Around 1928-31, the Committee on the Costs of Medical Care found in its survey of illness and receipt of medical services that the average person was making 2.7 physician visits per year.¹² Ciocco and Altman estimated from data collected on the patient-loan of physicians during World War II that the number of visits per person then was about 4.5.¹³ The current U. S. National Health Survey found for 1958-59 that the population was seeing physicians at a rate of five visits per person per year.¹⁴ The average experience of the Health Insurance

Plan of New York is a utilization rate of a little better than five visits per eligible person per year—in a setting where members and their families can obtain all the medical care they consider themselves as needing, without concern about the payment for individual visits.¹⁵

Ciocco and Altman noted from a more recent study of theirs that patient load was increasing. In a report presenting data for 1956, they observed that: "Comparison with previous surveys, particularly with the previous study in western Pennsylvania in 1950, indicates that the patient load of general practitioners has increased in the last several years. It now stands at the highest we have ever noted, even by comparison with data for the war years when serious shortages of physicians existed. That this trend in size of patient load reflects continued prosperity and the growing readiness of the population to seek medical care is not unlikely."¹⁶

An interesting development that would appear to reflect increased activity, as measured by number of patients being seen, is the changing ratio of office to home calls. In 1928-31, the Committee on the Costs of Medical Care, in its survey of illness and the receipt of services, found that the ratio of office calls to home calls only slightly exceeded one to one.¹⁷ The tendency evidently was not to call a physician unless the patient was quite sick. In the patient-load studies just referred to, the ratio in 1942 was found to be between three and four office calls to one home call.¹⁸ In 1950, a study in western Pennsylvania showed the ratio to be about five to one.¹⁷ Now the U. S. National Health Survey finds the ratio to be about seven to one in the country-at large.¹⁴

The public today is far from unaware of the remarkable advances that have been achieved in recent years in all fields of medical knowledge; people know that today's practicing physician can do considerably more to help his patients than could his predecessor a relatively short time ago. This dramatic progress, if it is to make real sense, must lead to increasing claims on its benefits. However, it

has been argued that physicians have by the same token so improved their efficiency that they now provide a greater volume of service in the same span of time. Dickinson once estimated that physicians increased their productivity by a third between 1940 and 1950.¹⁹ He attributed this greater productivity to technological progress in medical care, fuller use of nurses and technicians and diagnostic facilities, speedier transportation (though a deduction should perhaps be made for the time consumed today in finding a parking space).

To what extent some form of organization of medical services other than traditional solo practice can meet the threat of a physician shortage is conjectural. Group practice may be conducive to a greater volume of services to the extent that it facilitates consultations between physicians. The location of physicians' offices in or adjacent to the hospital should at least save travel time for the physician, but does not otherwise mean that more patients can be attended to, except as it too makes consultation easier.

The delegation of some tasks to paramedical personnel, nurses in particular, appears to hold most promise. The determination of just which functions can be handed over and how effective such transfer would be and how acceptable to physicians and patients needs documentation. A recent governmental report of a conference on manpower contained this pertinent comment on the subject:

"First of all, we need to develop more reliable data on the available supply, the use, and the need for paramedical personnel. *Need depends on the level of service that is desired* (italics ours). There are no clear-cut definitions of levels of service. We speak glibly of 'good quality care,' of 'the best quality care,' but these mean different things to different people. Nor are we clear on the duties and responsibilities of many of the physician's teammates, even those who are physicians themselves. This uncertainty and confusion stems from the many and rapid changes in the medical care picture. We are no longer sure that certain work previously done by the

physician should not now be assumed by the nurse and exactly how far we should permit the practical nurse and the nurse's aide to participate in the care of the patient. Should the laboratory technician be permitted to withdraw the blood he is asked to analyze? The available supply of nurses may go twice as far if we assign to others their housekeeping, clerical, messenger, and feeding duties."¹⁹

The Need for Service

Up to this point, the discussion has been in terms of demand for service; we have dealt with the problem of shortage as though it were a matter of economic supply and demand. But in thinking about medical care, we prefer to look beyond demand to the need for care and to the requirements for meeting need. A fundamental postulate we make is that adequate medical care of high quality should be had by all of the American people when they may require it. As Klarman has put it:

"In the field of medical care, a shortage in personnel or in facilities is conceived of as the difference between the numbers available to render service and the numbers needed. The use of need as the standard of adequacy is common to all discussions of medical care, both technical and popular, and is adhered to with remarkable consistency.

"Why is need the accepted standard in medical care when it is, at best, a subordinate concept in other areas of economic activity? I believe that need rather than consumer behavior in the market is the prevailing standard in medical care because by tradition we aim to make medical care of good (or adequate) quality available to all people, regardless of economic status and willingness to pay for it."²⁰

Nevertheless, it would appear that demand is the more likely of the two—need and demand—to influence supply of physicians and the utilization of their services. The solution to this seeming paradox—that need is the *de jure* and demand the *de facto* criterion, as it were, for measuring required physician supply—lies in making need and demand mean one and the same thing, to the extent that we are

able to. In a paper written almost twenty years ago, Ciocco, Davis, and Altman postulated four conditions under which demand and need might be drawn closer together:

"First, the patient must not only recognize symptoms but must be aware of the necessity of examinations designed to disclose asymptomatic disease. Second, he must believe that consultation with a physician will not only help him, but will be the best value for his money; he may otherwise consult a naturopath, a druggist, or his grandmother. Third, one or more physicians qualified to treat his disease must be geographically and otherwise available and must be known to or found by the patient. Fourth, the patient must have the funds, from one source or another, to pay for the physician, for ancillary services and materials, and for the living expenses of his family if incapacitation cuts off his earning power."²¹

A side-remark is interposed here for what it may be worth. Some economists have raised a question about the public's right to have all the physicians it may determine to be the need. Their argument is that in today's technical world an almost insatiable demand exists for physicists, chemists, mathematicians, engineers and others—to be drawn from the same limited supply of high-order intelligence and ability as physicians. The claim made by these economists is that this limited supply of talent should be distributed among the various professions and arts in a manner that will best serve all the needs of the American people.

Measuring the Need

A number of approaches have been employed by various persons to estimate the requirement for physicians in terms of medical need. The aim of this section is to outline as objective a technique as we can devise to reach an estimate of the total requirement.

The straightforward and perhaps most logical procedure would be first to determine and quantify the need of the population for medical services and then by some technique—actual trial and investigation preferably—to determine the manpower required to provide

these services at a high level of quality.

The most penetrating and careful "attempt to estimate the service required to supply the medical needs of the people" was also one of the first. This was the study by Lee and Jones for the Committee on the Costs of Medical Care, made about thirty years ago.²² Based on the opinions, and in many cases the records, of some 125 highly qualified physicians, the authors estimated the number and duration of visits of both general practitioners and specialists for specific diseases and other conditions requiring the services of a physician. These estimates were then applied to the relative frequency with which these diseases occurred in the population. To obtain this information about the extent of illness, Lee and Jones examined the findings of such sickness surveys as had been made up to that time. Adding together the physician-time required per 100,000 population for each disease, they arrived at the total amount of such time a community of this size would need. Dividing this total by the average time worked by each physician, or rather that he should be expected to work seeing patients—estimated by Lee and Jones at 2,000 hours per year—yielded the number of active physicians required. An addition was made for preventive services for the individual. The Lee-Jones estimated need turned out to be 135 physicians per 100,000 population.

As just indicated, the findings of Drs. Lee and Jones are now thirty years old; moreover, in these thirty years extraordinary medical progress has taken place. It is time, and so very much worthwhile, that their findings be brought up to date.

The Lee-Jones approach can be expressed in terms of an equation:

Total of (number of illnesses of specific kind × average amount of physician-time for each illness) = Number of physicians × average amount of time worked by each physician.

If the two terms on the left-hand side of the equation and the second term on the right are computed or estimated, the fourth term,

number of physicians, is obtained directly. Allowances would have to be added for research, teaching, public health and prevention, administration, and other special needs for physicians.

But the wish for a modern Lee-Jones report is more easily expressed than is the delineation of a method for bringing it about. How is the composition of good medical care to be determined? The medical practitioner is now as never before part of a complex network of general practitioners and specialists, of individual practice, partnership, and group practice; some 200,000 physicians constitute the core of more than 2,000,000 workers engaged in providing health services.

What criteria are to be employed for determining what is good care? The Lee-Jones study was based largely on the opinions of some 125 physicians. The complex situation just referred to would indicate the need for a larger sample, and probably a much more varied sample in terms of specialties.

In addition, if standards based on expert opinion can be set up as criteria, their validity should be tested by actual experimentation to make certain they reflect good medical care. It is not a simple matter to demonstrate that good care results in the increased health of the patients, but research into just what a good quality of care does for the patient can and should be undertaken. We need to know, and we do not know, what happens to people under different regimens of medical care.

The kinds of skills—translated into kinds of health personnel—that are most appropriate for the conditions that require health personnel should be examined carefully and defined. As a possible approach, the services required for each such condition might be defined and the type of personnel that might most efficiently perform each service determined. Numerous tasks now ordinarily expected of more highly skilled personnel can be performed by personnel with less training without any lowering in quality of results.²³

From determinations of the services for which we need the specialist, the general prac-

titioner, the various technicians, the graduate nurse, the practical nurse, etc., a structure of personnel need could be built. Not only would this kind of information permit computation of shortages in numerical terms, but it would go far in pointing out the directions in which solutions might be sought.

We are today more fortunately situated than were Lee and Jones with respect to the information we possess concerning the volume of sickness in the population. The U. S. National Health Survey is currently publishing considerable amounts of data on the incidence of sickness generally and of a number of fairly specific diagnoses. While these statistics have the drawbacks inherent in reporting by the population—via samples—they reflect known need. (Some idea of the extent of unknown

need may be gathered from clinical examinations of the general population.)

In addition, some of the prepayment plans that provide fairly comprehensive medical care benefits, which presumably approximate the need for physician services, are collecting data on the illnesses they are encountering. In one recent report, the Health Insurance Plan of Greater New York presented data on the frequency of various illnesses by age group of the patients as well as on the number of physician services for these illnesses.²⁴ A search of the literature should bring other useful data to light. All this information will provide a good beginning; the gaps can be filled in by special studies and the other means available for obtaining necessary information, including experimentation.

Summary

Few would disagree with the proposition that if a shortage of physicians does not now exist, it soon will.

This paper has been concerned with some more or less general remarks about the measurement of such a shortage. A number of the contributing factors have been described, and the possible effects of a shortage on

demand and utilization have been discussed. However, meeting the need for good medical care may be of greater moment. A method for measuring the number of physicians required for the provision of good medical services to all who need them has been outlined; that the method be explored is recommended.

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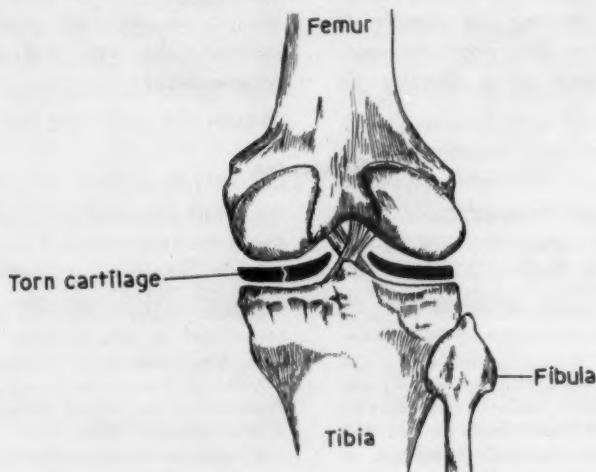
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Department of Biostatistics



CLINI-CLIPPING

Torn Cartilage of the Knee



ERADICATE TUBERCULOSIS

Don't Stop Halfway

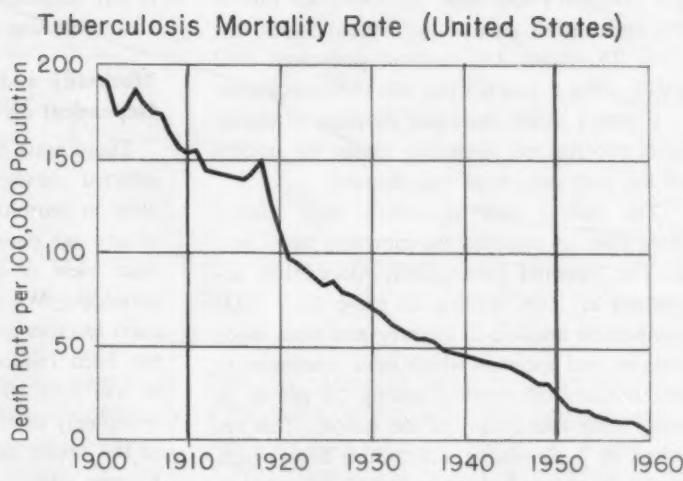


FIGURE 1

J. ARTHUR MYERS, M.D.
Minneapolis, Minnesota

If tuberculosis is to be eradicated, the lion's share of the medical work must be done by physicians in general practice. Thus, the responsibility of the members of this segment of the medical profession is obvious. This was recognized by Osler who said, "A last word on the subject of tuberculosis to the general practitioner. The leadership of the battle against this scourge is in your hands. Much

has been done, much remains to do. By early diagnosis, and prompt, systematic treatment of individual cases, by striving in every possible way to improve the social condition of the poor, by joining actively in the work of the local and national antituberculosis societies you can help in the most important and the most hopeful campaign ever undertaken by the profession." Trudeau also wrote, "On the general practitioner and the dispensary physician rests the great responsibility of detecting the disease in its incipiency. It is to them and not the specialist that the patient first applies."

Many physicians in general practice possess

the knowledge and the wherewithal to discharge their responsibility and all others can quickly qualify. Moreover, a considerable number of general practitioners have set the pace by individually and collectively demonstrating ideal procedures with gratifying results. Excellent examples are the reports of Simons and Hilleboe,¹ Danielson² and Gray.³

Phenomenal Accomplishments

Much has been done to control tuberculosis in this country as shown by the decrease in mortality rates. Available records reveal that, in New York, Philadelphia, and Boston, in 1812, the tuberculosis mortality rate was 450 per 100,000 population. By 1900, the rate in the registration area of the United States was 194. Thereafter, the decrease continued until 1959, when it was 6.5 per 100,000 population.

Figure 1 shows the rapid decrease of deaths from tuberculosis beginning about the middle of the first decade of this century.

The factors that apparently have played large roles in reducing the mortality rates are: 1. The National Tuberculosis Association, organized in 1904 leading to more than 2500 component municipal, county and state associations and societies which have continuously disseminated information among the people in every nook and cranny of the nation. This resulted in 2. Providing sanatorium beds which markedly reduced the populations of tubercle bacilli in homes and communities. The spread of tubercle bacilli from persons admitted to institutions was limited to visitors and personnel. Now in many places even they are protected by contagious disease technique. 3. Good treatment including collapse therapy which converted sputum for a tremendous number of tuberculous patients, and more recently, anti-tuberculosis drugs and resectional surgery. They have at least postponed deaths for many persons. 4. The nationwide tuberculosis eradication program among animals, particularly cattle, which began in 1917, markedly reduced the number of infections among people from the bovine type of tubercle bacillus as well as much clinical disease and some deaths from

this type of organism. In 1900, tuberculosis was the leading cause of death in the United States, but was in fifteenth place in 1959; nevertheless, it still causes more deaths than all other communicable diseases combined.

In 1958, the number of new reported cases of active or probably active tuberculosis in the United States was 63,000 against 83,250 in 1953. Mortality rates are always lower than morbidity rates (Figure 2) because not all persons with clinical tuberculosis die. Again, morbidity rates are lower than infection rates because not all infected persons develop clinical disease. Obviously, morbidity rates are dependent upon the backlog of infected persons in any community since it is they from whom clinical disease evolves.

Morbidity and Mortality Rates Dependent on Infection Rate

There must be a decrease in the number of infected persons before a corresponding decline in morbidity can occur in any area or at any age period in life. This situation is in clear view in most of this and some other countries. Wherever the percentage of tuberculin reactors among children and young adults has been reduced from 75 percent, or more, to less than 10 percent, morbidity has correspondingly declined. However, among persons in the upper age brackets of whom so many became infected in early life, and from 50 to 75 percent still react to tuberculin, morbidity and mortality are correspondingly high.⁴⁻⁸ For example, in Continental United States, in 1958, there were 12,361 deaths from tuberculosis. The rate was 7.1 per 100,000. However, among those from 45 to 64 years old, the rate was 14.3 and for those over 65 years, it was 30.6 per 100,000. In 1958, the total case rate was 36.4 per 100,000 population, but for persons between 45 and 64 it was 59.2 and for those of 65 years and older it was 73.3 per 100,000.

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Tuberculosis Morbidity and Mortality Rates in the United States, 1930 to 1960

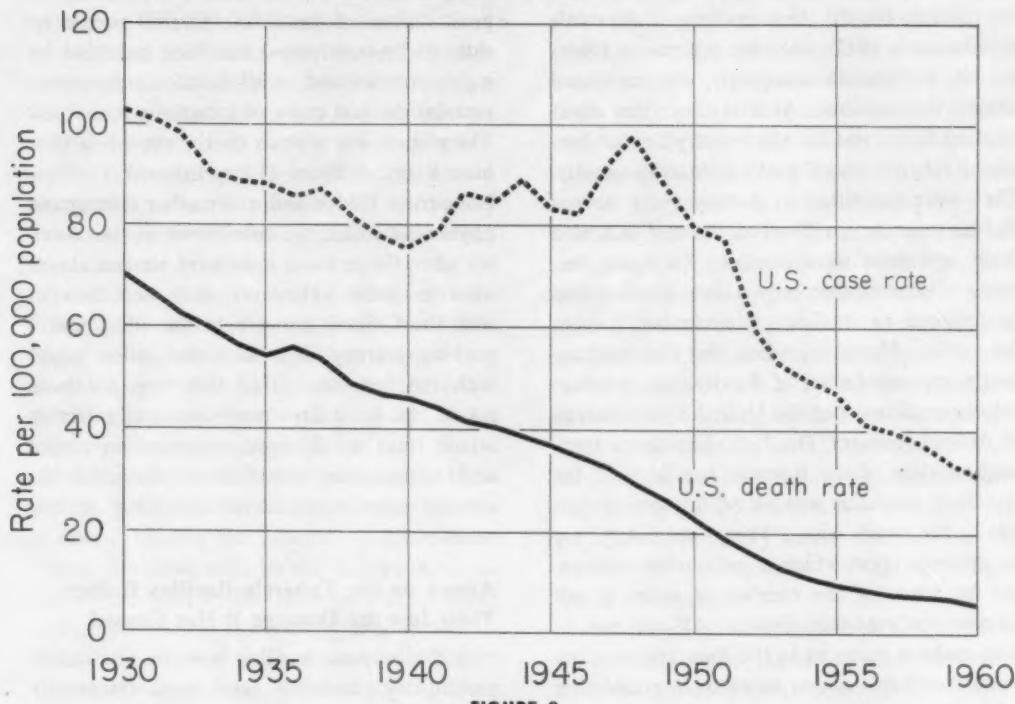


FIGURE 2

Figure 2 illustrates some important happenings in the tuberculosis eradication movement. In 1940, a divergence began to occur between the case rate and the death rate graphs. While the death rate continued to decrease without interruption, the morbidity rate increased from 76 to 98 per 100,000 between 1940 and 1948. This increase in the number of reported cases probably was largely due to one of the most intensive case finding campaigns in history which brought to light many lesions in the pre-symptom stages which otherwise would not then have been detected. About 1948, however, the wide gap between the death rate and case rate graphs started to narrow because of a precipitous decrease in the case rate which dipped from 98 per 100,000 in 1948 to 31 in 1960. Probably two factors were largely responsible for the decrease; relaxation of case finding efforts and marked decrease in numbers of infected children and young adults.

Thus the statement so often heard between 1940 and 1950 that death rates were decreasing faster than case rates no longer is true.

When one considers that only eighty years have passed since Koch announced the discovery of the tubercle bacillus and when one considers the armamentarium developed in the last two decades of the nineteenth century but was not put to much practical use until the twentieth century, it is almost inconceivable that such decisive battles could have been won over this organism of such antiquity in such a short time.

Less Than Halfway to Eradication Goal

Although tremendous accomplishments have been made, there is no place in the United States where one half of the work necessary to eradicate tubercle bacilli has been done. This is not an extravagant statement inasmuch as the work which remains is far more difficult

and time consuming than all of that previously done. Today, there is a much higher percentage of the people of the United States harboring tubercle bacilli⁶ than was true of the cattle population in 1917, when the nationwide tuberculosis eradication campaign was instituted among the animals. At that time, the veterinarians had a test by which every animal harboring tubercle bacilli could be found promptly. They were permitted to destroy every animal and its tubercle bacilli when the test indicated these organisms were present. To many persons, it seemed that only a few years would be required to eradicate tubercle bacilli from the cattle. However, when the first and recently appointed chief of the division of tuberculosis eradication of the United States Bureau of Animal Industry, Dr. J. A. Kiernan, a thorough student of the tubercle bacillus and the disease it produces was asked this question in 1917; his reply was, "There absolutely are no grounds upon which a reasonable estimate can be made of the number of years it will take to eradicate this disease. All one can do is to make a guess as to the time and it is my belief that if this nation succeeds in eradicating tuberculosis in fifty years, it will be one of the greatest heritages our successors will have handed down to them." Although in the forty-four years that have elapsed since Dr. Kiernan made that statement, great strides have been made toward eliminating tubercle bacilli from cattle,⁷ still among the 9,439,706 tested in 1960, 0.15 percent reacted. It appears therefore, that it will be more than fifty years from the time Dr. Kiernan spoke when the eradication goal is attained.

With a much larger problem by way of percentage of people infected today than was true of cattle in 1917, with no germicidal drug, with a pathological characteristic rendering tubercle bacilli containing lesions avascular; with a frightening complacency of our citizenry and with our present method of attack, there is no hope that the tubercle bacillus eradication goal can be attained in fifty years, or even a century.

This statement should not be discouraging for it refers to an organism that has been

wreaking havoc among the people of the world since the prehistoric days on the Plains of the Ganges. In those parts of the world where the great masses of the 2,700,000,000 people reside, its destructiveness has been recorded for eight centuries and, of all diseases, tuberculosis remains the first cause of incapacity and death. The picture was a much darker one when Herman Biggs, William Osler, Edward Trudeau, Longstreet Taylor and many other courageous physicians struck the first blows in this country when the problem must have seemed almost insurmountable. However, they were familiar with the Chinese proverb to the effect that a walking journey of a thousand miles begins with the first step. Had that step not been taken, the mortality, morbidity and infection attack rates would have continued to mount and tuberculosis would have remained the number one incapacitator and killer in our country.

Attack on the Tubercle Bacillus Rather Than Just the Damage It Has Caused

If the tubercle bacillus is to be eradicated, present-day physicians must work incessantly to reduce the populations of this organism by keeping those already inhabiting bodies of our citizens corralled. Even by doing the best that is known today, there is now no physician alive who will be living when the eradication goal is attained, but many physicians now living will see the eradication goal much nearer than it is today.

The armamentarium for this procedure has been available for more than a third of a century, during which time its use and eradication potentiality have been proved incontrovertibly. Therefore, all that remains is courage of physicians at least equal to that demonstrated by those at the beginning of this century, carrying on to the half-way mark and as far beyond as possible during their lifetime. The bulk of this work must be done by physicians in general practice. The problem is in their hands just as truly as it was in the hands of those in general practice to whom Osler and Trudeau spoke.

Knowledge of Pathogenesis Simplifies Problem

The more important of the well established facts about tuberculosis must constantly be kept in mind. Acquaintance with the early pathogenesis of the disease provides the explanation for the procedures necessary for eradication. After tubercle bacilli pass a portal of entry, such as the digestive or the respiratory tract, the conjunctiva or an abrasion of the skin, many are immediately ingested by neutrophils, which then enter the lymph or blood stream and are deposited in various parts of the body—the kidneys, spleen, lungs, bones, joints, brain, etc. More are deposited in the lungs than in any other organ, but those that are lodged extrathoracically may later produce bone, joint, renal disease, meningitis, etc., etc.

Within an hour after the invasion, at these various points of focalization, lesions start to develop. Usually the tubercle bacilli in these lesions are dealt with by the defense mechanism of the body in the same manner as other particulate foreign materials, therefore the reaction is non-specific. Encasements of fibrous tissue develop around the bacilli, with later deposition of calcium and true bone in many cases.

Promptly after bacilli are initially focalized, some are carried to the regional lymph nodes, where they are entrapped and encapsulated just as in the primary points of focalization. In combination, these early lesions constitute a primary tuberculosis complex.

After the body has first been invaded by tubercle bacilli and they have been encapsulated, there may be no further evidence of the disease throughout the individual's lifetime. On the other hand, at any time after focalization has occurred and the tissues have become sensitized to tuberculoprotein, one or more of the capsules may be resorbed and the imprisoned tubercle bacilli are liberated on allergic tissue. Such endogenous reinfections result in specific reactions of the tissue involved in the new invasion. Tuberculoprotein is a violent poison to tissues that have been sensitized to it. This response is in sharp contrast with the non-

specific reaction of tissues to tubercle bacilli immediately following the initial invasion. Thus, the lesions produced by the first infection (primary tuberculosis complexes) are exceedingly benign, but lesions produced in allergic tissue by endogenous reinfections are likely to be progressive, continuously or intermittently. In short, *the human body does not tolerate and control lesions of the reinfection type as successfully as those resulting from first invasion*. Although many lesions, even of the reinfection type, are brought under at least temporary control by the natural defense mechanism, enough of them are not so well controlled and clinical disease develops. It is to be remembered that of all the communicable diseases, tuberculosis remains the Number One killer throughout the world! Obviously, therefore, lesions resulting from initial invasions by tubercle bacilli are important in that they produce tissue sensitivity and in that they provide bacilli, the prerequisites for all the clinical forms of tuberculosis.

Lesions of primary tuberculosis complexes in internal organs are usually not detectable by conventional physical examination. Moreover, in only approximately five percent of persons with recently developed primary tuberculosis complexes is any abnormality revealed by x-ray films. After a year or more, in about twenty to twenty-five percent, calcific deposits in proper locations in the lungs, or hilum, or both, may attain such size as to cast visible shadows. In all other cases, the x-ray film fails completely. Thus, x-ray film inspection of the chest constitutes an extremely coarse screen which misses far more tuberculous lesions than it detects. Indeed, it fails to reveal most primary lesions because they are too small to cast visible shadows, or if larger, may not have consistency to obstruct x-rays, or are located in the twenty-five percent of the lungs not visualized on the ordinary posteroanterior x-ray film. Therefore, a so-called negative x-ray film is never proof of the absence of tuberculosis.

Ghon made meticulous necropsy examinations of one hundred and eighty-four children who had reacted to tuberculin but had no other

evidence of tuberculosis.⁸ They died from other conditions. In one hundred and seventy-seven, lesions were found in lungs, or regional lymph nodes, or both. They were so small in some cases that they were not found so he returned and took a second look because of the previous tuberculin reaction. In five bodies, lesions were not found in the chests but were located extrathoracically. In the remaining two, lesions were not found. In one of them, two guinea-pigs were injected with tissue prepared from the deep medial cervical and upper and lower tracheo-bronchial lymph nodes. The animals died from tuberculosis. In the remaining case, animals were not inoculated, and tuberculosis was not diagnosed.

Lesions of primary tuberculosis complexes do not produce distinctive shadows, in either their early or their later stages, by means of which they might be distinguished from conditions such as histoplasmosis and coccidioidomycosis. Thus, inasmuch as shadows seen on x-ray films are not pathognomonic, differential diagnosis is impossible unless, in addition to the shadows, one is able to obtain specific information.

The physician does not find tubercle bacilli with stethoscope and x-ray film. These instruments only reveal evidence of gross disease and even these findings are not pathognomonic. Recovery of acid-fast bacilli and proving them to be tubercle bacilli is specific. However, by the time they are first found even by the most refined laboratory methods, the infection usually has long been present and serious inroads have been made in involved organs. Therefore, in most chronic tuberculosis, as well as some acute cases, *recovery of tubercle bacilli is not an early manifestation.*

Tuberculin Test Is the Master Key

Without actually seeing them the physician can determine the presence of tubercle bacilli in the human or animal body by the tuberculin test. Indeed, the lesions of primary tuberculosis complexes are undetectable until approximately three to seven weeks after the invasion by tubercle bacilli. At that time, the sensitivity to

tuberculoprotein possessed by tissues, including the skin, has attained such a degree that it can be detected by the tuberculin test.

Following his classical pathological studies from 1908 to 1912, Ghon said, "From the point of view of a pathologist, I can therefore state on the basis of my own studies, which not only refer to all cases quoted in the monograph, that I am completely in accord with those who strongly believe in the specificity of the tuberculin reaction."⁸

Tuberculosis among cattle has been observed more extensively than has any other disease in animals. By the end of the fiscal year 1960, tuberculin tests totaling 414,314,153 had been administered to cattle in this country since 1917, and 4,111,051 reactors had been slaughtered and examined. Search for lesions in these carcasses has justified such confidence that veterinarians have continued testing the cattle of this country periodically even though only 0.15 percent reacted in 1960.

Despite the fact that it has long been known that in some places acid-fast bacilli other than tubercle bacilli may result in tuberculin reactions, the number of persons so infected is usually so small that they should not discourage one from clinging to the facts established by Ghon, the findings of the veterinary profession and the experience of a large number of physicians in human medicine.

In addition to the tuberculin test being our most valuable diagnostic agent in detecting the presence of disease earlier than any and all other diagnostic procedures, it has so many other values that it has been designated the master key which unlocks all doors through which we must pass toward the eradication goal. For example, it is our best epidemiologic procedure. A reaction indicates that the reactor has been in contact with a person who is eliminating tubercle bacilli. However, when an adult reacts to the first test administered, there is no way of determining when the invasion occurred, but when an infant reacts or an older person converts during periodic testing at sufficiently short intervals, one is on a warm trail of the contagious case. By examin-

ing the adult contacts (children rarely develop contagious pulmonary tuberculosis), one can apprehend the offender with sufficient frequency to justify searches in all such cases.

Diehl and Boynton⁶ practically eliminated clinical tuberculosis among students in schools of nursing and medicine by periodically retesting all of the individuals who had been non-reactors on admission and seeking the sources of infection for those who converted while in school. They were thus led to sources that had not previously been investigated in affiliated hospitals, in special tuberculosis services, in other institutions, and in the various departments within their own hospital schools, including bacteriology, pathology, medicine, surgery, etc., etc. Once these sources had been determined, they could be eliminated from teaching services or corrected, and thus subsequent generations of students were protected against tubercle bacilli. The effectiveness of a contagious disease control technic in tuberculosis could be determined only by periodic testing of the non-reactors after they had been admitted to and after they had left the service.

The only sound economy, both medically and financially, is practiced by working with persons who are harboring tubercle bacilli, and the only way to find all of them is by observing their reactions to tuberculin. The only way it can be known how many persons a contagious case of tuberculosis infects is by testing the contacts with tuberculin.

The tuberculin reaction is the only accurate evidence obtainable by which one can determine responsibility in cases requesting compensation for having developed clinical tuberculosis. It is the place where the initial infection occurred with tuberculin conversion that responsibility lies.

It is only by the tuberculin test that one is able to determine the magnitude of the tuberculosis problem among people of any group. Mortality and morbidity rates are not good criteria because not all persons who have tuberculosis die from that disease, and not all persons who have clinical tuberculosis have it diagnosed and recorded, but all persons who

react to tuberculin have at least primary tuberculosis — the forerunner of clinical disease. Therefore, the magnitude of the problem in any group or community is determined by those who react to tuberculin, for it is they and those whom they may infect who provide the clinical cases of the future. In no community, county or state, is the magnitude of the tuberculosis problem known until the entire citizenry has been tested with tuberculin and all persons harboring tubercle bacilli have been so located.

Until the magnitude of the problem has been determined, it is impossible to develop a satisfactory eradication program. In only a few places have attempts been made to determine the magnitude of the problem accurately. In all others, tuberculosis work has continued in a more or less hit-and-miss fashion.

In a few places, after a community-wide or county-wide educational campaign,^{10, 11} the tuberculin test has been offered to every citizen from infancy through senility. Maps have been made with thumb tacks indicating the location in the area of every person found to be harboring tubercle bacilli by means of the tuberculin reaction. This technic has been exceedingly revealing to people in areas where there has been no recent death from tuberculosis and where reported new cases have been so few that tuberculosis workers were considering discontinuing Christmas Seal sales and all other antituberculosis activities. Even in so-called "low incidence" areas, as many as twenty to twenty-five percent of people, mostly in the older age brackets, have been found harboring tubercle bacilli, and among them a crop of contagious cases is to be expected. Therefore a tremendous problem exists and will continue for a long time before tubercle bacilli are eradicated.

The effectiveness of a tuberculosis eradication program can be determined accurately only by the tuberculin test. For example, if a community or a county decides to launch such a program, it should first learn the magnitude of its problem by determining the locations of its tubercle bacilli. After the program has been in effect for five years, records of testing of the girls and boys born during that period and

comparing their percentage of reactions with those of individuals who were in the same age group just prior to the start of the program will determine more accurately than anything else whether the program is successful.

In *differential diagnosis* the tuberculin test plays a superior role. Contrary to former beliefs, the locations of pulmonary lesions, the x-ray shadows that they cast, etc. are not pathognomonic. Neither are symptoms or physical signs. An individual who has a demonstrable pulmonary lesion and does not react to tuberculin in adequate doses, with well known exceptions, probably does not have tuberculosis. Without the test, there could be no hope of eliminating the tubercle bacillus.

Most Dependable Method of Detecting Early Clinical Tuberculosis

Thus, the importance of the tuberculin reaction is obvious even in the person who is apparently in perfect health at the moment and in whom all other phases of the examination are unrevealing, since within the body of such an individual lie the potentialities for various subsequent forms of tuberculosis. Not only should a *complete examination* be given to persons found to react to tuberculin in any age of life, but *periodic reexaminations* should be given them as long as their tissues are sensitive to tuberculin. Only by these procedures is it possible for the physician to be on the scene when he can do most to control clinical lesions if and when they evolve.

The importance of this procedure was demonstrated more than thirty years ago when it was shown that periodic examinations of adult tuberculin reactors would often reveal evolving chronic pulmonary lesions on an average of more than two years before they made their presence known by symptoms, before they were contagious and when they could be treated successfully.¹³ Many years before antituberculosis drugs and resectional surgery became available, periodic x-ray films of the chests of tuberculin reactors brought to light evolving clinical lesions as soon as they were large enough and had sufficient consistency to cast

visible shadows on films. Treatment at that time nearly always controlled the lesions before they became contagious, prevented symptoms from appearing and provided excellent results with a minimum of the individual's time. *This procedure based on finding persons harboring tubercle bacilli, watching for clinical lesions to evolve and treating them as soon as the diagnosis was established, together with other phases of the management of persons with tuberculosis, justified the statement that everything that was needed to control and ultimately to eradicate tuberculosis was known and was in use.* There are literally thousands of people in this country whose lesions were found and managed in this way who thereafter began and continued to live normal lives. To the treatment of those days, there was later added antituberculosis drugs capable of suppressing tubercle bacilli and resectional surgery as seems indicated for residuals, especially cavitation.

Without the tuberculin test, this would not have been possible, for most persons with clinical tuberculosis would not have been examined until their sense of well-being was gone. By that time, approximately eighty-five percent would have had advanced contagious disease with doubtful to bad prognoses.

Antituberculosis Drugs Valuable but Not a Panacea

Several antituberculosis drugs have been in general use for a decade or more. These are streptomycin, paraaminosalicylic acid and isoniazid.^{13, 14, 15} Any combination of two of these drugs is exceedingly helpful in suppressing tubercle bacilli in lesions which have sufficient vascularity that the drugs reach the tubercle bacilli. This applies to most active and progressive thoracic and extrathoracic lesions, both acute and chronic. By suppressing tubercle bacilli in such lesions, the body's natural defense mechanism is less hampered in its healing effort. Lesions which cannot be adequately controlled with the assistance of drugs, such as those containing pulmonary cavities, the disease is often suppressed to such a degree that resectional surgery may be done with impunity;

therefore, these drugs have made previously impossible extirpation of lesions feasible. There are other antituberculosis drugs not as generally accepted as the three mentioned but which are used under certain circumstances such as when the major drugs are not well tolerated or the bacilli become resistant to one or more of the major drugs. This group includes such drugs as cycloserine and viomycin.

The present drugs are of great value under conditions mentioned above, but they by no means constitute a panacea in the treatment of tuberculosis. In the first place, *no single or combination of drugs destroys all tubercle bacilla*. Another serious handicap is that *tubercle bacilli often become resistant to drugs.*¹⁶ Fear is now being expressed over the fact that among persons found to have tuberculosis, those with bacilli resistant to antituberculosis drugs before having had drug treatment is increasing. In fact, this is now true of over eight percent in the United States and has been reported as high as nineteen percent in one country with an average of 6.5 percent in seventeen countries. It has been estimated that there are already seven million persons infected with drug resistant tubercle bacilli in the United States. Even now there is severe criticism of administering drugs to persons for whom there is no hope of complete control of disease including many elderly patients. Tremendous numbers of such persons have received anti-tuberculosis drugs. It is likely that many of them have later transmitted drug resistant tubercle bacilli. Many believe that long-time administration of adequate dosage of drug combinations with all other indicated treatment may control treatable lesions so well that the likelihood of subsequent reactivation and contagion is greatly diminished. Longer periods of observation are necessary to establish fact.

Considerable controversy is being waged over administration of antituberculosis drugs to children reactors to tuberculin at the age of three years and under, and those older children and adults who are known to have recently converted. This procedure is being seri-

ously questioned by some students of tuberculosis on the ground that present drugs are not dependable germicides. Although they are usually good suppressants, there is reason to believe that when drugs have been discontinued after long periods of administration, the suppressed tubercle bacilli are likely to revive and become just as dangerous to the subsequent health of the individual as they would have been if the drugs had not been administered. Indeed, they may become more dangerous for having acquired resistance so as not to respond to drugs if clinical lesions subsequently developed. The proponents of drug administration for recent converters contend that by suppressing tubercle bacilli one lessens the likelihood of the acute forms of disease which occasionally appear soon after the tissues become highly sensitized — entities such as pleurisy with effusion, meningitis, miliary disease involvement of bronchi and enlargement of lymph nodes etc. resulting in atelectasis. In fact, there is some evidence that the presence of drugs in the blood stream if and when bacilli escape from lesions of primary complexes may prevent reinfection type of lesions from developing.

The opponents, on the other hand, ask why so many tubercle bacilli should be made drug-resistant, since clinical lesions occur so rarely among recent converters. In fact, so rarely as to make administration of drugs to all converters impracticable and unprofitable since the few clinical lesions which do evolve are usually satisfactorily treated with drugs. To administer antituberculosis drugs to tuberculin reactors, children under three years and to recent tuberculin converters among older children and adults, may result in later elimination of tremendous numbers of drug resistant bacilli to invade the bodies of other people.

Already there is considerable evidence that enthusiasm for drugs may have outrun judgement. With our present knowledge of anti-tuberculosis drugs, it seems that limiting them to persons with progressive clinical disease should be highly recommended.

Opponents of drug administration also point out that it is difficult to convince parents to administer drugs for a year to a child whose only evidence of tuberculosis is a tuberculin reaction. In fact, it is not possible to have correct and precise information as to how regularly children and recent converters living in their homes take the drugs. Novak¹⁷ has commented editorially on a study conducted by Lichtenstein on twelve hundred and fifty-seven children under four years of age. It was found that fifteen percent of the eligible children never started to take the prescribed drugs. Of those who started, thirty-eight percent failed to complete a year. Moreover, of the fifty-two percent supposed to finish, many of their parents admitted they did not give isoniazid regularly.

There can be no doubt that the policy of treating recent converters will be sound when a dependable and safe germicidal drug becomes available. At the time of conversion, the lesions are nearly always small and vascular. Therefore, a germicide in the blood stream could be expected to reach all tubercle bacilli in the multiple lesions in the patient's body and thus cure the disease in the strict sense of the word.

After tuberculin conversion, the interval during which such a cure might be expected is not known. How soon lesions lose their blood supply has not been determined. In any event, once the blood supply is lost, tubercle bacilli in such avascular regions would most likely be safe from any drug, regardless of its germicidal qualities or its concentration. It must also be emphasized that resectional surgery is not a panacea. While it is of tremendous help in many cases, it is not possible to remove all tuberculous lesions. Not infrequently, the surgeon palpates lesions which were not demonstrated on x-ray film. In the removed specimen, the pathologist finds macroscopic lesions which the surgeon could not palpate, as well as numerous microscopic lesions. Such lesions may exist undetected in unremoved lobes of lungs and in other organs, each of which is capable of evolving to clinical proportions.

All Necessary Information and Armamentarium Available to Eradicate Tuberculosis

We are fortunate that all necessary basic research has been done so the essential information and the armamentarium are available for the eradication of tuberculosis. In some other diseases, especially cancer, research must be the watchword. The causes are not known, and therefore workers in those diseases are in the position that tuberculosis workers occupied before 1882. But for tuberculosis, the basic research of Koch and others resulted in determining the cause, specific diagnostic measures, good treatment and adequate preventive measures. We are therefore in a position to confine ourselves to applied research—the finding of optimal methods for using what has been learned through basic research. Even a large volume of applied research has already been done, and methods of indisputable value are already in use.

Most Difficult Eradication Problems Lie Ahead

Despite all that has been learned, and despite the fact that we have long known all that is necessary and have assembled the armamentarium for the eradication of the tubercle bacillus, we are now traveling the most difficult part of the road leading to our goal. In fact, we have taken such great strides that large numbers of people, including many professional workers, seem to feel that the present momentum will carry our program to complete success without further expenditure of effort. One is reminded of the late afternoon of a day early in World War I, when the German army marched to the outskirts of Paris and could have passed into the city almost unopposed. However, the officer in charge decided to wait until morning before marching his forces in triumph through the streets. But when morning came and all was prepared for the march, it was impossible. The Parisian men, women and children had devoted the night to preparations for preventing that triumphal entry.

The army against the tubercle bacillus is now almost in the same position that the German

forces occupied outside Paris. The present sense of false security and our egotistical attitude toward our accomplishments to date have so slowed our march that there is considerable danger that, if quick action is not taken, the goal may never be attained.

It was long contended that persons whose tissues react to tuberculin but who are apparently in good health and who have clear chests on x-ray films must have been immunized against the clinical and destructive forms of the disease. Therefore, it was supposed that *all such persons walked within a charmed circle of freedom from illness or death from tuberculosis*. By many this concept is still tenaciously embraced. The erroneousness of that theory was not recognized until large numbers of persons who had reacted to tuberculin while being apparently well had been observed over relatively long periods of time. Those observations proved incontrovertibly that clinical tuberculosis evolves only in the bodies of persons who have previously been tuberculin reactors. The true dictum is that persons who react characteristically to the tuberculin test *walk within the circle where all illnesses and deaths from tuberculosis occur!*

Sound Eradication Measures

Dangerously Threatened

Probably nothing threatens ultimate eradication of tuberculosis as much as failure to comprehend the observations of Ghon and others, proving incontrovertibly that, with well known exception, a characteristic tuberculin reaction indicates the presence of tuberculous lesion and, therefore, the reactor has tuberculosis. This failure precludes the diagnosis of tuberculosis at the most vulnerable period in its entire course of development. Negligence, or refusal to recognize these facts and act accordingly, allows the disease to attain clinical stature and become contagious in many cases, before it is diagnosed. This is unsound practice economically, epidemiologically, and educationally and causes the victims unnecessary illness, or even life.

In conferences and conventions, often the keyword is "yield." What does this or that procedure yield? In such places, invariably, yield means how many cases of gross clinical tuberculosis were discovered. Sound thoroughly tested tuberculosis eradication programs in schools are often opposed on the ground that so few advanced and contagious cases are found among the children. Hence, it is said the "yield" is too small to justify the time, effort and expense. This concept of tuberculosis ignores the individual who only reacts to the tuberculin test and therefore is a case of tuberculosis.

Sight is lost of the fact that the gross lesions being sought were once microscopic and microscopic lesions now existing in examinees may become gross.

Populations of the three types of tubercle bacilli have been markedly reduced but tremendous numbers remain which are capable of multiplying rapidly thus restoring and increasing their former numbers. Tuberculosis must be recognized as a generation disease. Our present favorable situation is the result of the work of preceding generations. The situation for the next generation is in our hands. We must gird for a long and strenuous combat realizing that the endeavors of several generations of ceaseless workers will be required. *To relax effort, hoping for someone to produce an immunizing agent, a germicidal drug, or the disease to die out spontaneously, is to join hands with the tubercle bacillus.* Hope for a vaccine is forlorn, since an attack of the disease does not result in dependable immunity. Even if a germicidal drug became available, it would not, or could not, be employed at the proper time and in sufficient numbers of people to bring about a quick solution of the problem. Witness smallpox for which there has been available a method of eradication for more than one hundred and fifty years—yet four hundred thousand new cases are reported in the world annually. For the disease to die out spontaneously is most unlikely—it hasn't yet happened anywhere.

Summary

The information at hand and the procedures described in this paper constitute the best available tuberculosis eradication methods. By them so much has been accomplished that there has never been a time like the present to win the complete victory over tubercle bacilli. Our knowledge of the disease and our armamentarium are adequate. In this country, there are over two thousand five hundred tuberculosis organizations which can be of immense assistance by delivering information to the mem-

bers of every home and contributing other substantial aid.

Nurses are capable of doing much of the tuberculin testing, epidemiology and other helpful activities. The veterinary profession continues protecting people against tuberculosis in animals. The leadership must be shouldered by the ninety-four thousand physicians in general practice who can not only hold the line, but also constantly draw nearer to the eradication goal.

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WHAT'S THE DOCTOR'S NAME

Identify this famous physician
from clues in the brief biography.

PAGE 76a

*An evaluation of
chlordiazepoxide
in patients in an
industrial setting*

INDUSTRIAL PSYCHIATRY

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Emotional factors play an important part in the health and efficiency of industrial workers. At least twenty percent of the industrial population, at both managerial and labor levels, exhibit some degree of abnormal mental behavior.¹ Only a small number of these individuals are frank psychotics who must be referred to psychiatric treatment before they constitute a threat to their fellow workers, or impair industrial efficiency. The rest, for the most part, manifest varying degrees of emotional instability, impaired personality, addiction, or a sense of inadequacy. Not all of these characteristics, of course, take on the aspects of a serious hazard to the operation. Some emotional sensitivity in a capable person can increase his value as an employee, while other individuals, particularly those with minor inadequacies, can become useful members of the work group through careful placement. On the other hand, there is a tendency to restrict the classification "unsatisfactory mental health" to the more overt trouble-makers, e.g., the chronic absentee, the alcoholic, the accident-prone, the constant complainer, etc. Yet it has been increasingly evident that a major problem in industry is the person who is not working at his maximum efficiency because of poor emotional adaptation.² This problem generally arises in persons

who previously have been cooperative, are able workers and administrators, but who have become habitually "off" as far as their work performance is concerned. In these persons, the manifestations of anxiety-tension are insidious and may take a long time to reach the full-blown stage. More often, the anxiety tends to become recurrent, though not necessarily chronic, increasing in intensity during time of stress. Despite possible aggravation by a job-related condition, the root of such anxiety can usually be traced back to the individual's home situation and life pattern.^{1, 3}

While it is not the responsibility of industry to provide intensive psychiatric help for its personnel, management must appreciate the part that counselling and psychiatric "first-aid" can play in aiding the employee to make full use of his work potential.^{1, 4, 5} Six years ago, a program of psychiatric counsel and aid was established on a part-time basis at the Hanes Hosiery Mills Company, Winston-Salem, North Carolina. The results of this program have been highly satisfactory for both labor and management. The quality and quantity of pro-

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duction have increased, take-home pay has gone up, and there has been better mutual understanding of the problems of employer and employee with a consequent improvement in labor-management relation. The program has also created the opportunity for first-hand research in industrial psychiatry, as exemplified by the current report which is the result, in part, of an investigation into the use of psychotropic drugs in an occupational setting.

The use of psychotropic drugs as aids in the management of emotional problems has become an accepted practice in medicine and psychiatry. However, the widespread use of tranquilizers and habit-forming drugs has placed them among the agents which promote many problems in industry.^{6, 7} Whereas the sedative and ataxic effects of some drugs may not constitute a serious problem in sedentary persons, they can impair the performance of the industrial worker, resulting in lower production, less pay if he does piecework, and danger to his own and the life of others if he is employed at moving machinery or with vehicles. In attempting to determine the most satisfactory psychotropic drugs for use in industrial personnel, we initiated an investigation of tranquilizers and barbiturates with particular emphasis on their possible effects on the acuity, alertness and manual dexterity of the worker.

Among the agents investigated was chlordiazepoxide (Librium®*). A review of the literature indicated that Librium was a potent, highly effective agent for the control of a wide range of emotional disturbances,^{8, 11} as well as an excellent adjunct in conditions that are or may be aggravated by emotional symptoms.^{12, 13} Of particular interest to us was the fact that in the lower dosage ranges recommended for mild to moderate emotional conditions, reports of ataxia and drowsiness had been rare.

Materials and Methods

The subjects of this study were women employed as loopers at the hosiery mill. A brief

description of the looping process will serve to indicate the manual dexterity, visual acuity, and alertness necessary for this work, and the importance to the workers' production and pay of over-sedation and muscular incoordination.

The looping process closes the heel and toe on a seamless ladies' stocking. The stocking is knit in a tubular fashion entirely by machine, but the heel and toe are finished by hand on a machine called the steady dial looper. This machine has a diameter of about thirty inches with steel points, about forty-eight to the inch, jutting out from the edge. The operator sits in front of the machine under a fluorescent light and, by hand, loops each tiny nylon thread over a point as the dial rotates at a steady pace. The operator is paid on a piecework basis; i.e., the more she produces, the more she is paid. Therefore, if she develops any anxiety, tension, or tremulousness, her production falls off along with her pay check. If she is given a drug which helps her anxiety but produces sedation, or interferes with her manual dexterity, she may feel better symptomatically but her production and salary will remain low.

Chlordiazepoxide was administered to fifty women seen at the psychiatric clinic of the mill. They ranged in age from nineteen to forty-one years, the average being 29.5 years. All complained of mild to moderate anxiety with the usual symptoms of nervousness, tremulousness, irritability, mild insomnia and anorexia; also work productivity was decreased. They were referred to us by their foreman, the plant medical director, and occasionally by the personnel department; a few were self-referred. Most of the women were married, had family responsibilities in addition to their work duties, and were suffering mainly from anxiety reactions to environmental, or family, stress. None of them exhibited basic psychopathology.

The prescribed dose of chlordiazepoxide was 5 mgms., t.i.d. Twenty-five of the women had previously received chlordiazepoxide in doses of 10 mgms., t.i.d. but when the study was formally initiated the dosage was reduced to 5 mgms., t.i.d. They received no adjunctive

* Trademark for chlordiazepoxide, Hoffmann-LaRoche Inc., Nutley, New Jersey.

TABLE 1 RESULTS OF LIBRIUM THERAPY —

As reflected in the payroll schedules of 50
women treated for anxiety-tension reactions

PATIENT #	PAY SCHEDULE		AFTER THERAPY	RESULTS			
	6 MONTHS PRIOR TO THERAPY (CONTROL)	AT START OF THERAPY		EXCELLENT	GOOD	FAIR	POOR
1	\$86.50	\$82.98	\$87.94	x			
2	78.28	76.32	73.48			x	
3	57.95	49.20	57.94	x			
4	66.09	58.76	65.85	x			
5	68.95	63.45	72.68	x			
6	110.72	92.20	107.39	x			
7	86.38	80.64	80.49			x	
8	87.65	79.02	90.52	x			
9	75.21	61.67	74.38	x			
10	94.50	87.60	97.37	x			
11	72.21	69.34	71.46		x		
12	94.37	82.69	95.28	x			
13	96.12	88.08	95.56	x			
14	52.45	49.16	54.37	x			
15	85.16	86.30	82.87			x	
16	72.28	71.16	73.38	x			
17	73.97	62.86	74.36	x			
18	81.74	68.68	82.31	x			
19	71.39	48.29	70.28	x			
20	62.95	54.97	66.21	x			
21	79.38	78.08	79.15		x		
22	60.96	58.34	61.57	x			
23	59.70	56.37	58.80	x			
24	49.10	47.60	48.80		x		
25	71.10	67.40	71.02	x			
26	80.94	70.42	81.85	x			
27	59.16	48.68	59.78	x			
28	65.83	69.70	60.65			x	
29	72.68	70.62	73.69	x			
30	90.10	85.25	89.73	x			
31	58.92	48.80	59.70	x			
32	65.98	49.05	66.24	x			
33	106.14	96.40	108.25	x			
34	73.04	56.12	72.58	x			
35	58.12	57.12	58.16		x		
36	59.97	58.60	60.12		x		
37	59.16	51.62	60.24	x			
38	64.75	60.24	59.17			x	
39	84.90	84.16	85.29		x		
40	75.12	77.18	74.19		x		
41	65.18	68.12	66.14			x	
42	65.90	64.37	65.39		x		
43	82.16	67.67	81.34	x			
44	52.47	48.16	52.38	x			
45	64.12	70.16	66.17			x	
46	53.18	54.12	52.38		x		
47	57.80	59.71	58.52			x	
48	86.40	87.82	86.12			x	
49	77.10	72.74	76.24	x			
50	69.39	67.44	69.38	x			
			TOTALS	32	9	1	8
				(64%)	(18%)	(2%)	(16%)

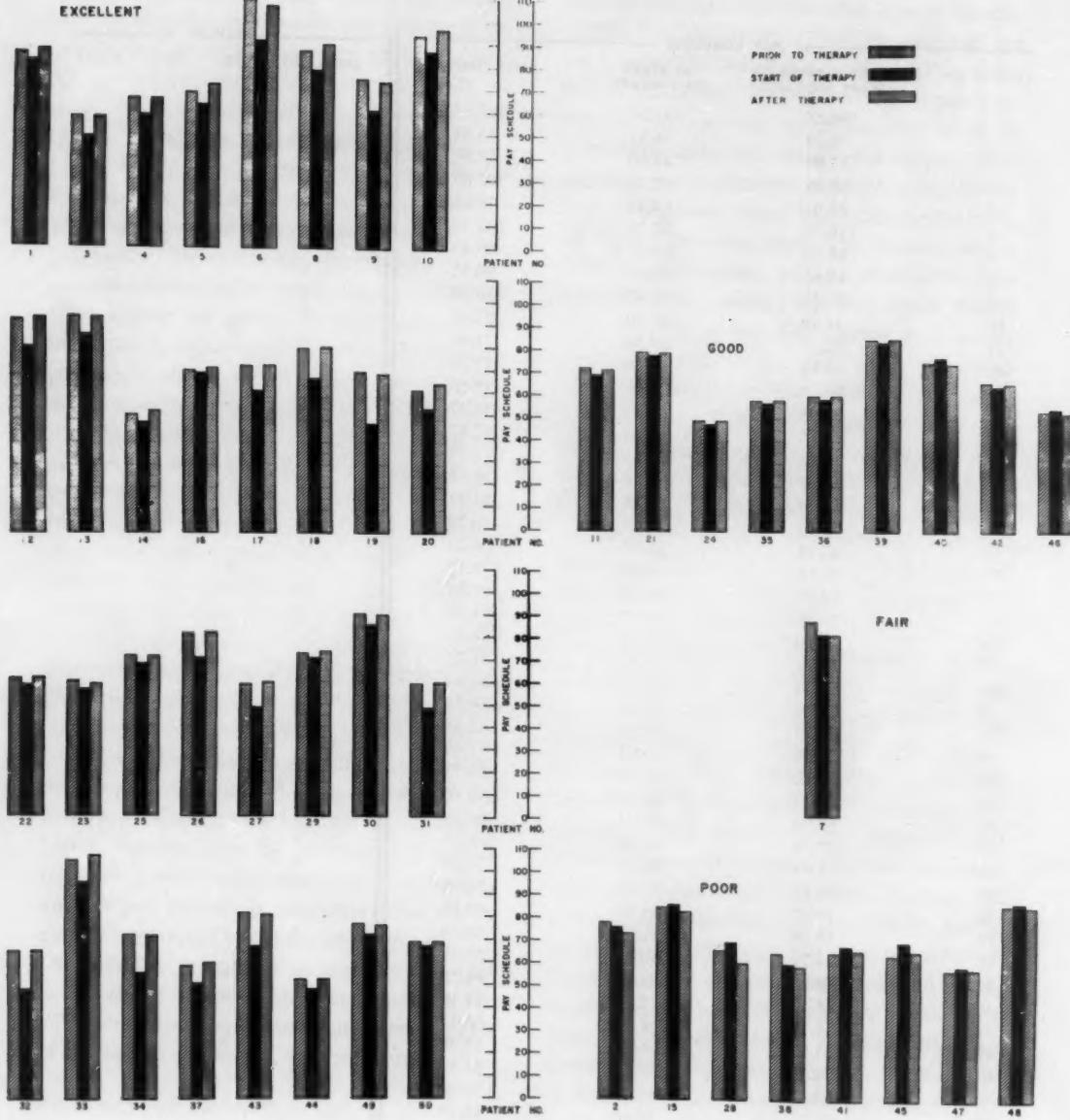


FIGURE 1

medication or special consideration and worked their full eight-hour shift daily. All of the women were kept on medication for a minimum of four weeks and most of them for six to eight weeks.

The results were evaluated on the basis of symptomatic improvement and increased production levels as reflected in the woman's pay after two weeks and after six to eight weeks of therapy. As a control we used the average pay of these same women during six months prior to the development of anxiety symptoms. The responses were considered *excellent*, if symptomatic relief occurred with concomitant increase in production equal to, or approximating, the six-month pre-therapy level; *good*, if there was symptomatic relief but no appreciable change in production before, during, or after, development of the anxiety symptoms; *fair*, if there was symptomatic relief but no change in production level during therapy; *poor*, if there was no symptomatic improvement regardless of the production level.

Results

A comparison of the payroll schedules (Table I, Figure 1) shows that excellent results were obtained in thirty-two women (sixty-four percent), good in nine (eighteen percent), fair in one (two percent), and poor in eight (sixteen percent). While almost all the women who obtained symptomatic improvement showed some increase in production, those who failed to respond symptomatically also failed to increase their production levels and salaries. It should be noted that with the criteria adopted for evaluating the results a patient with only a good or fair result in production may have had an excellent symptomatic response. A failure to improve the work level may have indicated only that the anxiety had not significantly impaired the working capacity of the individual.

A statistical analysis of the results revealed the following:

1) the probability that the differences between the pay at the start of therapy and at the end of therapy is less than 0.01; such a difference may be regarded as a highly sig-

nificant increase in salary after therapy. Further, there was no significant difference ($P > 0.05$) between the average pay schedule during the six-month control period and that after therapy (Wilcoxon matched pairs signed-ranks test was used).†

In other words, the patient's productivity was restored fully to the pre-anxiety level.

2) A chi-square test of independence performed to determine the relation between clinical response and salary showed that a direct relationship between reaction to treatment and salary obviously exists ($P < 0.001$).

No side effects or untoward reactions were noted. There were no subjective complaints of ataxia or drowsiness, nor was there any objective indication of loss of dexterity or coordination. We had previously observed that the women maintained on 10 mgms., t.i.d. had shown, at that time, some slight over-sedation, but this disappeared completely when the dosage was reduced.

Discussion

In our previous experience with meprobamate and the barbiturates, particularly Butisol® Sodium, some symptomatic relief was achieved by the women doing this particular work, but the sedative side effect impaired their dexterity and prevented any increase in production. With Librium, however, the results were highly satisfactory in both respects. The anxiety symptoms were relieved in most of the women, and there was no interference with work production or coordination. This absence of sedative and ataxic side effects gives it an advantage over other psychotropic drugs particularly when used in industrial personnel for whom interference with work capacity is undesirable.

These data are at variance with the observations of Murray,¹⁶ who reported incapacitating ataxia and a sense of irresponsibility in patients being maintained on doses of up to 100 mgms. per day, which is considerably higher than the

† Carl L. Schekel, Flanders, New Jersey.

recommended daily dosage. On the contrary, it would appear from our study that chlorodiazepoxide administered in low doses in no way impaired work efficiency, nor released aggressive, euphoric, or irresponsible tendencies in transiently disturbed individuals. The marked psychologic improvement and the complete absence of ataxia was evident from the higher levels of production and increased wages achieved by our subjects. Such results could not have been obtained had there been any impairment of judgement, or loss of manual dexterity.

A strong factor in determining the outcome

of this study was the nature of the anxiety states in these women. They were not long-term chronic anxiety reactions involving personality changes and behavior disorders. In all of the women, the acute anxiety had developed in response to some environmental stress, and it was to be expected that they would respond sooner and better symptomatically than a chronic anxiety group. From similar observations made by other investigators,^{8, 10, 12, 13} it would appear that one of the major contributions of chlordiazepoxide to psychotherapy is the quick response that it elicits from the mildly or moderately disturbed patient.

Summary

Librium® was administered to fifty women employed as loopers at the Hanes Hosiery Mills Company. They were maintained on doses of five mgms., t.i.d. for from four weeks to eight weeks, during which time they did not receive any adjunctive medication.

The results were evaluated on the basis of both symptomatic improvement and increased production. Excellent results were obtained in sixty-four percent of the women, good in

eighteen percent, fair in two percent, and poor in sixteen percent. There were no side effects or untoward reactions.

It would appear that Librium is highly effective in controlling mild to moderate anxiety symptoms.

The complete absence of sedative and atoxic side effects with the low dosages administered makes it particularly advantageous when used in industrial personnel.

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Urgent Tasks

Confronting Medicine

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Yale Medical Democrats and other friends—

To give your first Sigerist Lecture is a distinguished honor. Because you have chosen that great medical historian as your patron saint, certain obligations devolve upon your lecturers. The use of his name reminds us that to look into the future with wisdom, we must develop some insight into the past. We cannot intelligently, or safely, speculate about what lies ahead, unless we have some feeling for what has gone before, but nonetheless, God forbid that we should, in any way, be bound by the past.

Henry Sigerist, who incidentally made an important speech here at Yale¹ just 25 years ago this month, has traced for us in his many writings, man's painful efforts to save his own life and preserve his health, from earliest times, by measures which for convenience we may call medical. Always he studied the history of medicine in its proper relation to that of the culture in its broad outlines. He looked into the future of medicine constructively, seeking ways in which it might better serve mankind in a world in process of cataclysmic change. To yearn for the good old days, said he, is pure romanticism. Physicians must be akin to the social problems of their time and seek ever to understand them. Ideals rather than ethics per se are the important consideration.

The overwhelming fact in our day is the crescendo rise in population. From it stems, directly or indirectly, most of our vital problems. This growth in population, strangely enough, is occurring in famine areas no less than in affluent America. Have we the wisdom and strength to meet these threatening condi-

tions with foresight and resolution, or shall we stumble along with attention only for immediate problems?

A couple of months ago, I attended a panel discussion on "Medicine of the Future" in which five distinguished men participated. To my amazement, these panelists said nothing

about problems of population, until forced to do so by questions from the floor. I am sure that reluctance to face such questions is not due to escapism but rather to genuine bewilderment as to what can be done about them. In any comprehensive consideration of the "Medicine of the Future," however, the population explosion has got to be accepted as an inescapable part of the overall problem. The magnitude of what man is up against is most easily grasped by a glance at the curve of his increase (Figure 1).

It is evident that we are entering a very critical stage. Our increase is changing from a slow gentle rise to a skyrocketing type of course. We are changing direction through an arc of nearly 90°. On a planet of fixed size, it is obvious such a course cannot be followed indefinitely. For survival of the human race, the direction of the population curve will have to be radically altered, and the sooner this is done, the better man's prospects on earth. Man could conceivably do this for himself, but if he doesn't, nature will do it for him, in some fashion frightful to contemplate.

The only ways in which population growth can be checked, or halted, either by man, or by nature, are by slowing birth rate or accelerating death rate. Man is in possession of methods by which he can control his birth rate, but has he the will and skill to use them effectively? His death rate he can only increase by methods, which to civilized man, at least, are unacceptable, or at best, repugnant. These include suicide, homicide, genocide, and war which now can be nuclear. There are also negative possibilities, such as withholding food from famine areas, or abolishing all kinds of medical services. These too are unacceptable. Therefore, if man wants to reduce his increase in numbers, his only recourse is to birth control.

If he fails to make sufficient use of this,

Nature will take over, and ultimately *homo sapiens* will go, as have thousands of other species before him, into extinction. There are several ways in which this might happen. Outrunning the food supply and starving is the most obvious. This is what Malthus² predicted a century and a half ago. The first world-wide famine might not prove fatal. After a billion or so people had starved to death, the food supply might again come into balance with the population, and a respite, for a time, might be had. But unless the birth rate were, thereupon, held in check, the cycle would in time be repeated, perhaps, over and over again until the species finally died. The process could be accelerated by widespread and uncontrolled disease. On the other hand, it might be delayed repeatedly by the achievements of science in increasing food supply, very likely by synthetic processes of one sort or another, which utilized either nuclear or extra-terrestrial sources of energy.

A less well known threat to man's survival, receiving attention from ecologists, but not much from anyone else, is, instead of lack of food, lack of space. *Lebensraum*, the Germans call it.

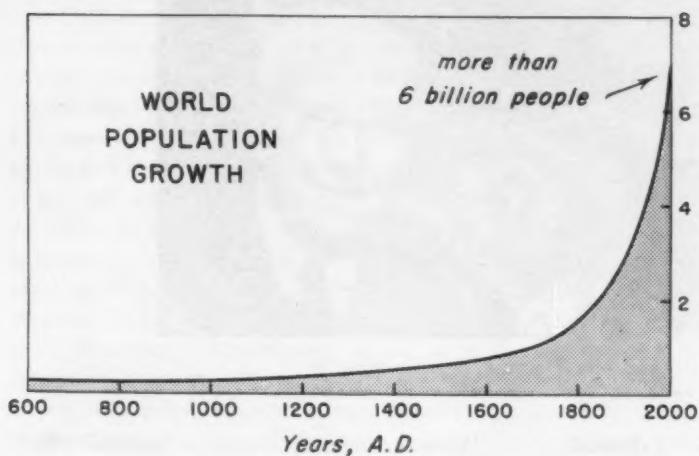
There isn't much precise information about this in human beings, but there is some remarkable evidence in other species. It has been found, for example, in a considerable number of mammals, that populations undergo rather regular cyclic fluctuations. The population rises until a peak is reached at which time a lot of individuals die rather suddenly, and for no very obvious reasons. The ecologists call this phenomenon the "die-off." Of it, J. J. Christian³ says—"The cycle length will be related directly to the time it takes the population excess over death rate to peak to a point beyond the carrying capacity of the environment, hence highly stressed conditions.

One thinks, in this connection, of the famous lemmings, and the snowshoe hares, of which your Professor of Biology, E. S. Deevey⁴ has written with such wit and discernment. Then there is a very specific observation on a die-off episode in a herd of Sika deer, reported

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The Sigerist Lecture, Yale Medical School, Auspices of "Yale Medical Democrats."

FIGURE 1 Curve of World Population



by Christian, Flyger, and Davis.⁵ An island in Chesapeake Bay of 280 acres was inoculated, in 1916, with "four or five" members of an alien species of deer. In this salubrious spot, they were fruitful and multiplied reaching, by 1955, a population of 280-300, or a density of one deer per acre. Then in the winter of 1958, in two months' time, sixty percent of the herd died. Studies of the dead deer showed no evidence of malnutrition, nor convincing evidence that infection played a role in the die-off. Two years later, the remnant of the herd made an apparent recovery, and growth of population was resumed, as before. What was regarded as the most significant anatomical finding was a gain in weight of the adrenal cortex between 1955 and 1958, and a return to usual weight in 1960, when the recovery period had set in.

Christian, in casting about for an explanation of the die-off, seized upon the so-called alarm reaction of Selye⁶ and hypothesized that the deer might have died of exhaustion of the "adreno-pituitary system," caused by stress which in turn resulted from exceeding the "*carrying capacity of the environment*." That is to say, death from stress due to overcrowding.

Whether anything of this sort has ever happened to human communities, I am sure I do

not know. The appearance of the world population curve, however, suggests that if it never has happened, it could do so in the not too distant future. That man himself could have a die-off from stress, even with no significant food shortage, when his numbers exceed, space-wise, the carrying capacity of his environment, is, at least, a possibility worth considering.

*Learn from the life of a lemming,
Be warned by the fate of a deer!*

The reason for touching on these matters, ever so lightly, is because they will, inevitably, color your thinking and affect your activities, not only as men and women of medicine, but as members of the human race, in the kind of world that lies ahead. They need mention also to point up the frightening apathy that most people have concerning population problems at the present time.

I am convinced that wherever you go, or are going, in medicine, the pressure of the growing population, constantly will bear down on you. It will modify your goals and your opportunities, as well as your modus operandi. It will progressively interfere with your freedom. It is one of the doctor's duties to understand the behavior of people. He must know that as their number increases and their living space decreases, and as they despoil the planet of its natural resources, their capacity to re-



Dr. and Mrs. Henry E. Sigerist taken in Switzerland shortly before his death.

main civilized may be expected to diminish.

But let not all these considerations depress you, rather let them challenge you to overcome new obstacles and find satisfaction in such accomplishment. Whether you serve your medical calling by bringing medical care to individuals, to communities, or in some component of what we may call global medicine, you will always be confronted with the proliferation of human beings and with all that follows in its wake. The practitioner of medicine must develop some understanding of what ever more crowding does to people in general and especially to his patients. The public health people must know that the elimination of one disease may create several new ones. There is no more sardonic fact than that by saving lives we may lose them. Improved sanitation without corresponding increase in food supply may do no more than to exchange disease for famine. He who meddles with an ecosystem (a balance of nature or culture) without appreciating the possible consequences, does so at the peril of many people.

There can be no doubt that crowding has a variety of ill effects on human beings, as well as on other species. It shortens their tempers, and heightens the stress under which they labor. Tension and hurry erode the leisure necessary to civilized living. This is particularly true of doctors! Standards of family living decline, largely because of lack of space.

Anxieties build up over how financial, educational, social, and medical necessities are to be procured. More and more resort is made to tranquilizing drugs and the like. The struggle for existence is intensified. The precept, "love thy neighbor," is overshadowed by "survival of the fittest." But a conflict between God and Nature raises theological questions too awesome for the likes of us even to contemplate.

Prodromal symptoms of the decay of our culture are already apparent. Think what the modern motorcar is doing to our behavior. Behind a wheel an otherwise gentle person can become a public menace. Think of the depredations of Madison Avenue, of the widespread unwillingness to accept responsibility, of the prevalence of the passing of bucks, of the decline in civic pride in our congested cities, of increasing juvenile delinquency, of the dreadful state of transportation, of the deterioration of our manners and courtesies, etc., etc. All these may be attributed, primarily, to too many people.

I recall a conversation pertinent to all this held back in the interbellum era, with the distinguished discoverer of Vitamin C, Szent-Gyorgi. Several of us were asking him about the state of science in the Europe of that time. "The trouble," he said, (I am quoting him from memory) "is that in Europe we live too close together, and we do not know how to

live close together. We need civilizing influences."

In the midst of such things, how is the physician to comport himself? First, he must everlastingly remember that medicine is for people, not for doctors. It is a professional calling not a business. It has high ethical and moral standards which it is your duty always to maintain in the full spirit thereof, and not merely in the letter. In these days of decreasing morality in business and politics, you can have the satisfaction of holding the line for decency in medicine. That is one of your urgent problems. Medicine, like matrimony, is not to be entered into unadvisedly or lightly; but discreetly, advisedly, and soberly and, under no circumstances, for the sole sake of financial reward. If you want to get an inkling of how medicine can be enjoyed to the utmost, read Wilder Penfield's recent novel about Hippocrates, "The Torch."⁷ You will find it a civilizing influence.

But we must focus also on immediate tasks. The most critical problem facing the medical profession today, and the public, lies in the field of medical education. How are we going to produce enough doctors to meet the needs of our rising population? At present, the population is running away from its supply of doctors. At the same time, medicine seems to be diminishing in popularity as a calling. We have been slow in recognizing these facts, but in September 1959, a very important government document, the so-called Bane Report,⁸ was published, cram full of information on these matters. The Bane Report is actually entitled, "Physicians for a Growing America," and it was prepared by a "Consultant Group on Medical Education" at the request of the Surgeon General of the U. S. Public Health Service, Dr. Leroy E. Burney. Your own Dean Lippard was a member of it. The Group addressed itself to the question "How shall the Nation be supplied with adequate numbers of well-qualified physicians?"

From this Report we learn, among other things, that the growing need for physicians stems not only from the rapid growth of popu-

lation, but also from an increased demand for personal medical services, and for specialized and non-clinical services. "For the layman," says the Report, "the problem is evident. What do the people, the consumers of medicine, want now? They want more of the doctor's time! It is their one important complaint: Doctors are too busy . . . we'd like to talk more, to tell more; we'd like them to explain more; to listen more." Surely this is an impressive arraignment. It also puts us in a terrific quandary. With a supply of doctors which, relative to population, is diminishing, how can we arrange to have each one spend more time with patients? There would seem to be only two ways to do this, both of which will have to be used. First, to produce doctors at a faster rate, and then to allocate their work so that there is a minimal waste of their time. Time spent with patients, so long as information is being exchanged, is not to be put in the waste category.

The Bane Report shows further that, in 1930, we were graduating about 5,000 MDs per annum. This gave us about 125 per 100,000 people. In 1959, graduations had got up to about 7,000 per annum, which yielded approximately 132 MDs per 100,000 people. Merely to maintain the 1959 ratio, it is estimated, will require that we graduate 11,000 MDs in 1975. But actually, it is pointed out we shall, because of the increased demand for medical services, need considerably more than that. To achieve such a goal will necessitate the establishment of an impressive number of new medical schools, and the recruitment of a host of new medical and premedical teachers. Teachers are vitally important in medicine, just as they are in all categories of education. In fact, without teachers there will be no education except self education. Noble as this last may be, it cannot alone serve all the purposes of medical education.

As though all this was not enough, we have, coincidentally, increasing difficulties in the recruitment of medical students, both in numbers and quality. From another source⁹ I've culled this—"A decade ago 40 percent of ap-

plicants for medical schools were straight-A students (in college); this figure has now dropped to 16 percent. A decade ago 3.5 students applied for each student accepted by a medical school; this ratio has now been cut in half." I can remember hearing President Conant of Harvard say, in the late thirties, I believe, to the Faculty of Medicine, that the best brains were no longer going into medicine. Some do even now, of course, but not in so high a concentration. Mr. Conant's remarks incensed the Faculty somewhat, but subsequent events proved him right.

There has been a good bit of searching for the causes of the diminishing popularity of medicine as a calling. The Bane Report states the belief that medicine still "has enormous prestige and drawing power" and that deterrents to medical education are chiefly the excessive time required to complete it, and its high cost to the student. Both of these considerations put medicine into a poor competitive position with other types of professional education. The great array of opportunities in the Ph.D. categories is particularly undermining to medicine. Personally, I believe that medicine perhaps has *not* now got quite the prestige and drawing power that it used to have. As to "prestige," the political skulduggery of organized medicine has disgusted many people. And with regard to "drawing power," the opportunities in biology, biochemistry, and physics may draw, more strongly than medicine, those young people with a deep interest in science.

A yet more recent report is the so-called "White Paper of the Association of American Medical Colleges,"¹⁰ put forth only last January. The preamble of this report begins with the statement that "the American people are deeply concerned about health," that is to say about obtaining health services and medical services, adequate to their needs. The growing shortage in all medical personnel is an obstacle to their obtaining them.

Both the Bane Report and the White Paper recognize that greatly increased support for medical education, including financial support

directly to students, is imperative, and that it must come from a variety of sources, voluntary and tax supported, including massive support from the Federal Government.

Some attention, but by no means enough, has been given to shortening the overall course of the education of the physician. I have been convinced for years that this could be done without lowering standards, and have agitated for it from time to time, but with no noteworthy success.

I believe, however, that, if candidates for medicine could be committed to the career earlier, in some cases, in high school, certainly by freshman year in college, and, if faculties of arts and sciences and of medicine could get together effectively, a blended course of general and professional education could be offered which would permit graduation in medicine in six, or seven, years after matriculation at the freshman level. Such shortening could be accomplished by pruning the medical curriculum of non-essentials, eliminating duplication between the arts and sciences program and the medical program, and by better integration and correlation throughout; integration vertically, as well as horizontally. I believe that such a combined program would attract more students not alone by saving them both time and money, but, hopefully, by making more sense than the present fragmented affair, and by providing more meaningful goals and more powerful stimuli.

Another suggestion for increasing recruitment of medical students is to entice more women into medicine. Some countries, notably Russia, have a very much higher percentage of women in medicine than do we. From my own experience in this matter, which goes back at least to the middle twenties when we began taking women interns on the Medical Services of the Massachusetts General Hospital, I have formed the opinion that women are as capable of becoming fine physicians as are men, and that we should welcome as many well qualified ones as we can get. It should be pointed out, however, that women who raise families may not be able to give enough time to medicine

to justify the costly education which they have received. This presents a dilemma, which I will not attempt to resolve. The fact that President Kennedy has chosen a woman to be his personal physician should be a strong fillip to the recruitment of women for medicine.

Also bearing on the problem of making medical education more appealing, and at the same time, more efficient, is a proposal by David D. Rutstein,¹¹ Professor of Preventive Medicine at Harvard, which has become interestingly controversial. "The medical schools," says Rutstein, "since the Flexner Report (1910) have pursued a policy which favors the education of experts, i.e., scientists and specialists, rather than general physicians." This is all right, we need such people, the very best obtainable, but we also need well trained general physicians in far greater numbers, and our medical schools are falling behind in producing them. "A possible way out of this impasse," Rutstein believes, "is to follow the lead of schools of technology, such as M.I.T. They have recognized that the educational needs of the physicist and the engineer are different. Although students entering these fields may start off together, their curricula diverge." This is not to say that one is inferior to the other. "In medicine," Rutstein continues, "a similar program is possible. Two curricula can be designed—one for research workers, specialists, and the other for general physicians." I must confess to seeing considerable virtue in Rutstein's proposal, but Dana W. Atchley,¹² of Columbia, fears that it would lead to a segregation of sheep from goats, so to speak, and that Gresham's Law would soon apply. He prefers that we only aim at producing sheep, and would sooner see part of the community get on without medical services than be cared for by the goat-type of doctor. If his premise is correct, I would have no disagreement with him, but I do not believe that it follows that Rutstein's two-curricula proposal would inevitably lead to a sheep and goat product. I think the product could all be of sheep, but of two different kinds of sheep. All students could be given the best possible education for

what they are going to do, but what they are going to do will fall into categories with different educational requirements.

This much will have to do on the problem of increasing the supply of doctors. Let us now approach the problem of how can their services be used most efficiently, economically, and expediently. What is the best way to bring first rate and up-to-date medical care to all of our people—best that is to say for the people? To any detached viewer it will be at once obvious that solo practice, fee-for-service, free choice of physician, is not the answer in our present culture. Under such a system, and with doctors getting in even shorter supply and therefore enjoying a sellers' market, fees may be expected to rise in accordance with the economic law of supply and demand. If medical care were a commodity, which, if forced to do so, we could safely go without, then the market mechanism would be a satisfactory method of distributing it. But medical care is not a commodity; it is, as stated before, a professional service, the benefits of which are needed by all, and to which, according to our prevailing social and ethical philosophy, all people are entitled, whether they can pay its costs or not. The situation is comparable to that of public school education.

Medical care, of course, includes many more services than those of physicians and surgeons; the costs of hospitalization, for instance, nursing, social service, and other paramedical services, the cost of drugs, many of them probably unnecessary, and a variety of appliances. All of these costs are skyrocketing in an alarming way. What portion cannot be paid for by the patient has to be paid by government supported, or voluntary agencies, of one sort or another.

Not only does the increasing relative scarcity of doctors make professional services more expensive, but it makes it progressively harder for patients to obtain them. It is just harder than it used to be to see a doctor, or to get him to see you. This does not necessarily signify any flaw in his professional conscience; it may be merely an indication that he is over-

worked. There can be no doubt that many practicing doctors, because of their inadequate numbers and their antiquated methods of practice are overworked. And if overworked, they become fatigued, like anybody else, and if fatigued, the quality of their work can decline.

Poor geographic distribution of doctors presents another problem—there are probably not too many anywhere, but the scarcity is greater in some areas than in others. Planning to provide better distribution, both of total number of doctors in any locality, and also of the ratio of generalists to specialists, is on the whole, but in its infancy.

Planning for the location of hospitals so that in any wide area their facilities may be available to both patients and doctors alike, in relation to actual need, is also very important.

Organization for medical care, therefore, would seem to be in order. In a national health service like Britain's, organization for medical care is of the essence. Far too much so, doubtless would be the comment of many American doctors. But we may ask, can we do something of the sort by voluntary effort? At least we can try.

To date it would seem that the most promising approach in the United States is through some form of voluntary group practice. Some progress has been made in this direction already. At the meeting of the APhA at San Francisco last November, the results of a nationwide survey of group practice in the United States by the NIH was presented by Dr. S. D. Pomrince, Director of the Survey.¹³ Some significant points emerged. For example, between 1946 and 1959, there had been a threefold increase in the number of practice groups during this period. At the present time there are about 200,000 MDs in the United States and over 10,000, or five percent of the whole, are practicing in groups. It is a growing movement. The growth is faster in some parts of the country than in others. When the number of doctors in full-time group practice is related to that of solo practicing physicians, the highest concentration of group physicians, 18 percent of the total, is found in the block

of seven North Central states, and the lowest in the states along the Eastern seaboard from Maine to Florida—the conservative East!

To quote the Pomrince Report, "The predominant activity of medical groups is the provision of general medical care (as distinguished from referral work or diagnostic only.)" The groups have both generalists and specialists among their number. Patients have one of the generalists as their personal physician, and the specialists in the group are chosen to represent those specialties most commonly needed. Such groups have their own clinic or office facilities, and they must have access to proper hospitals where they can continue in charge of hospitalized patients.

Perhaps the most distinguished adventure in group practice is the Health Insurance Plan of Greater New York, which is a chain of practice groups scattered throughout all its boroughs. It has over half a million subscribers and is steadily growing. There can be no question that it gives high grade medical care and that there is general satisfaction among both its patients and doctors. Several medical societies have tried to scuttle it, but thus far have been unsuccessful.

Much criticism has been directed at medical practice groups, chiefly by conservative doctors, to the effect that the personal relation of doctor and patient is lost. It can easily be shown that this is not so, and it can be pointed out in favor of groups that in present day society they offer the only dependable 24-hour-365-day-a-year coverage. Some groups still work on fee-for-service, but the fees are collected by the administrative office, put in a kitty from which the doctors are paid salaries agreed to by the group itself. Other groups have achieved prepayment, meaning that their subscribing patients pay an annual fixed premium, and together with Blue Cross or its equivalent, get budgetable prepaid comprehensive medical care.

Doctors of the present generation are apt to be strongly opposed to working on salary, but I would like to point out that doctors working full time for universities, or governments,

are paid by salary; also, doctors serving full time in the practice groups which are on pre-payment. Many other professionals, teachers, college presidents, clergy, and others are paid by salary. Why not doctors? Doctors should be well paid because they have invested much in their education and have acquired considerable skill, but if they really love medicine and are in it for its own sake, they can be happy on salary. In all probability, as practice groups increase, and solo practice dwindles, the great majority of doctors will be on salary. This will be one of the adjustments that will be required of the medical profession by the type of world we face.

There are a great many variations of the group practice principle, and these as they function are on trial before the people. One can even say that the whole movement is a great experiment of the sort which I believe the medical profession is morally obligated to make. It must be willing to do research, and make explorations in the educational, administrative, social, and economic areas of medicine, no less than in the biologic.

In the biologic areas, as a matter of fact, research is doing very well. That is why, important as it is, I haven't had more to say about it in this particular lecture. It is at the moment in happier case than either practice or teaching. There has been since World War II an incredible expansion in funds for the support of research, both from governmental and private sources. The chief problem becomes that of finding people who show special prom-

ise of being able to do original and creative research. When found they should be supported generously and given great freedom to follow their lines of inquiry as their own scientific imagination directs. They must, of course, at any time have access to enlightened criticism.

There are many special and new fields of medicine which urgently need to be advanced, such as occupational, industrial, environmental, rehabilitative, and social medicine, but unfortunately, there is not time to discuss these now. Instead, in closing I will mention but one, namely the psychiatric.

The provision of psychiatric care at the present time is singularly inadequate from the community point of view. There are, in the first place, not nearly enough psychiatrists, and those that we do have are sometimes too doctrinaire to be useful on a community-wide basis. The psychoanalytical technique, undoubtedly a powerful instrument for exploring the human mind, is too costly in both time and money to have application to more than a handful of highly selected patients. More expeditious methods of supplying our huge number of neurotic persons with psychotherapy will have to be made available, and for our appalling number of major psychotics, something better than locking them up in mental hospitals will have to be developed.

There are thus plenty of urgent new tasks for you to sink your teeth in. I wish you all success in undertaking them.

I thank you.

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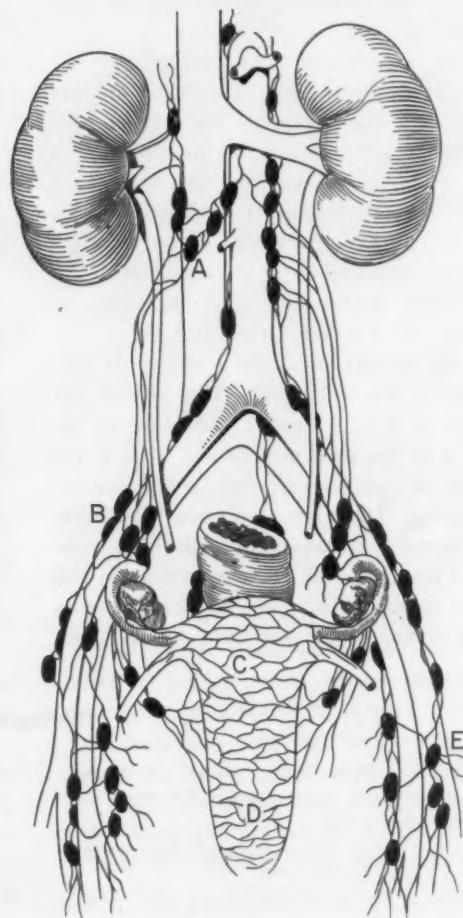
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CLINI-CLIPPING

LYMPHATICS OF ABDOMEN AND PELVIS (Female)

- A. Lumbar Nodes
- B. Hypogastric Nodes
- C. Uterine Lymphatic Network
- D. Vaginal Lymphatic Network
- E. Inguinal Nodes



MEDICAL WANTS and NEEDS

in Mature and Developing Nations

EDWARD D. CHURCHILL, M.D.
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No one ever has been able to distinguish between the demand for medical attention and the need for medical care. The economist can shy away from arguments about the importance of the wants to be satisfied. The doctor cannot avoid the thought of appendicitis when a mother telephones that her child has thrown up his supper and says his stomach hurts. Here lies a basic difference between the supply of medical service and the supply of many other personal services or of a commodity such as automobiles. Medical wants, whether real or imagined, more often than not are based on apprehension and fear.

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Address for the Harvard Foundation for Advanced Study and Research Harvard University, June 14, 1961.

Medical wants demand medical service; medical needs require medical care. Service at the individual level involves an interpersonal exchange between doctor and client which has a twofold function. First comes the assessment of the need for medical care. Having determined a need, then follows the provision of suitable care or guidance either by direct or indirect means. When wants deemed urgent by the client are not expeditiously met, the service is judged unsatisfactory. To inform a client that he does not need medical care may in itself provoke or intensify dissatisfaction.

The Foreword to the Special Supplement of the October (1960) issue of *Harper's* opened with two statements: "1. American medicine is the best in the world. 2. Millions of people are dissatisfied with the medical care they are getting."

It is not clear that the editors of *Harper's* made a distinction between service and care—between wants and needs—when they phrased the statement that millions are dissatisfied with their medical care. Also, many who seek med-

ical care are already unhappy people. The very act is likely to be an expression of dissatisfaction with some personal situation. The situation may reflect some need that is not remediable by medical care; its roots may be economic, legal, or political, genetic or cultural. In some instances the physician may be able to help the client acquire insight into the true nature of his want even though it is beyond his power to satisfy it; in others, even this is impossible to achieve. While the term "mental health" has again come into common usage it should be recognized as an open-ended and, indeed, compounded abstraction which falsely conveys a sense of the concrete.

Turning again to the two statements in *Harper's*, it is clear that the key to the paradox lies in the superlative "best." Best for what? Wants or needs?

What do the people, the "consumers" of medical service want? As a recent writer has said: "They want more of the doctor's time! It is their one . . . important complaint: Doctors are too busy . . . we'd like to talk more, to tell them more; we'd like them to explain more, to listen more." In Galbraithian economics "as a society becomes increasingly affluent, wants are increasingly created by the process by which they are satisfied." Is medicine caught in the squirrel wheel model of the good society?

Scarcities in War

Toward the end of the European phase of World War II, Henry L. Stimson, then Secretary of War, had occasion to say that we had come ". . . rather suddenly in sight of the ultimate limitations of manpower and resources." So far as the medical profession was concerned, this experience highlighted a significant difference between the supply of health personnel and the supply of company commanders or of trucks and ammunition. It is impossible to increase the supply of physicians at short notice.

The supply of physicians is but one element in meeting health needs and wants. Mr. Stimson mentioned resources; there is also organ-

ization of effort. The application of the wide range of techniques which protect man from the hazards of his environment requires that individuals organize themselves or be organized in those endeavors that are directed toward a specific goal. Our society is well aware of the fact that technology submerges individualism and is accelerated by a well knit social structure. Some comfort is found in the frank admission that the application of techniques is only one facet of the total human endeavor.

A military undertaking affords a prime example of the concentrated application of technology to attain a specific and limited objective. In consequence it becomes a de-personalized affair. Speaking from within the framework of the army, Mr. Stimson made the assumption that organization at the technological level would take place. To remind the command that there was a limit beyond which submergence of the individual could not extend even in war, he stated: "I consider that the care of the sick and wounded and the character of the hospitalization in the Army are matters for the direct responsibility of the Secretary of War." Having personally accompanied Mr. Stimson in his inspection of army hospitals in Italy, I can testify to the seriousness with which he invested this responsibility.

Steps were taken during the initial phases of the war to divide the medical manpower fairly between military and civilian needs. Age and physical fitness helped make the division. Military needs were met only by a careful allocation of physicians and the use of each man to the best advantage in his field of expert skills. The sick and wounded with specialized clinical needs were brought together into centers where specialized personnel were concentrated. Military doctrine was set aside and this adaptive planning extended from the zones of combat in Europe and in the Pacific to and through Continental United States. It was learned that transportation need make little difference except in the mind of the patient.

The population at home increased by 5 million during the war. By exhausting effort the physicians allocated to civilian needs were

able to meet the demands placed upon them. Nevertheless, to use again the words of Mr. Stimson, we came "rather suddenly in sight of the ultimate limitations of our manpower."

The experience of World War II warns of the necessity for long range planning in supply and organization. Today the need for physicians must be measured against the rapid growth of the population with a more than proportionate increase in the younger and in the older age groups. These require the most medical service, and exhibit the greatest need for medical care. The wants of the entire population call for thoughtful appraisal.

Scarcities of the Future

The Surgeon General of the Public Health Service, in 1958, asked a Consultant Group on Medical Education to report on how the nation can be supplied with adequate numbers of well qualified physicians. The supply is conventionally measured by the number, including osteopathic physicians, for each 100,000 of the population. The maintenance of the supply depends primarily on the number of students graduated. By 1975, the Consultant Group reported, the nation will need 330,000 physicians and an annual graduation rate of 3,600 more than the present rate. So if the minimum goal of maintaining the present ratio of physicians to population is to be met, the facilities of existing medical schools must be increased substantially to enable them to increase their enrollment and new schools must be established. This expansion, the Consultant Group reported, must be undertaken at once. Delay will only magnify the impending deficit.

This report is presumably the national guideline but its implementation will only maintain the present numerical ratio of physicians to population. In 1975, if the assumption of the Editors of Harper's is correct, "millions of people" will still remain "bitterly dissatisfied with the medical care they are getting." Also, let us not be completely unaware of certain pockets in this country in which very large deficits in medical care lie concealed. Citizens are now directing energies toward bus terminal

washrooms and lunch counters; sooner or later they will peer into these pockets. There will be found not only economic, but ethical, moral, legal, and religious issues that make the washroom appear like a problem in elementary arithmetic.

I shall pass over the "resources" mentioned by Mr. Stimson with a single comment. The supply of physicians has been measured only in its quantitative aspect. Quality is of paramount importance. In this century science has provided the doctor with powerful tools-tools that, used with expert skill, determine the issue between life and death; between hopeless crippling and useful life span. These tools are forged in laboratories of science and are being handed to practicing doctors at an increasing rate. Poor or non-rational medicine is expensive medicine-expensive in dollars and in life and suffering.

Poor medicine may be the product of mediocre education or defective motivation. It also stems from the circumstance that the physician must have access to data now frequently unavailable to him or meaningless if he tries to obtain them himself. For action he must have access to tools and skills he does not possess and that may be beyond his reach. As Secretary of War, Mr. Stimson was safe in his assumption that military doctrine provided organization that would make effective use of physicians and also would provide them access to tools and facilities. His concerns were limited to manpower and resources. My repeated reference to the model of military medicine should not be taken by implication that I consider such a system acceptable by or desirable for the American people. Its defect—submergence of the individual—has been indicated. On the other hand, it may be folly to assume that effective use of physicians and their access to tools and facilities will arise spontaneously.

Professor Emmet Hughes recently described the model of the practice function of the profession in civilian life. I may add that this model exists not only in the minds of the people but lingers in the conventional wisdom of the profession itself. "A series of individual

practitioners, each working with his own tools, and each of whom waits in his office for people who come with their problems . . . to seek his advice and action . . . all can be treated at the appropriate level by the simple device of the physicians placing themselves strategically and making the decision as to who needs what in the way of medical care." As Professor Hughes comments, few should take that model of medical practice seriously, and, I may add, some do not, as events are showing. Practice on such a model will be severely strained to meet the needs of a rising population; it is already showing its inability to keep pace with the wants of an age of high mass-consumption. On the other hand, in the minds of many conscientious physicians only this model can supply the benefits of individual medical service. Their clients both accept and demand it. However, Professor Rostow has counselled: "A society like the United States . . . must use its resources fully, productively, and wisely. The problem of choice and allocation — the problem of scarcity—has not yet been lifted from it."

The dilemma shared by profession and community is found in the extent to which the interpersonal elements of medical service can be submerged in order to provide the powerful technology essential to effective medical care. The problem of scarcity may not permit us to enjoy both.

A Period of Organizational Revolution

Rapid changes in scientific and social attitudes are testing the ability of all professions and other groupings of human activity to adapt themselves to new situations and responsibilities. Observers familiar with cyclic periods of reorganization in the history of professions have recognized the present time, manifested by problems and dilemmas that appear insoluble, as a period of organizational revolution. Certain directions in which the medical profession may move and is being moved to bring its manpower and resources into line with its basic commitments are already discernible.

Measures to yield more effective use of the

doctor's time seem inevitable. Integration of specialist skills with each other and with the generalist is already on its way. The past 14 years have seen a 300 percent increase in the number of doctors in group practice and also in the number of groups. Large systems of medical care under governmental or labor union sponsorship have appeared. Further delegation of simpler professional judgments to members of other health professions and of technical tasks to ancillary health personnel is economically sound and will reduce the overall work-load on educational institutions. It is tempting to say that the nurse can take over some of the work of the doctor. She has done so for many decades and will continue to do so. But the nursing shortage is a rock on which the nation's hospital system has repeatedly foundered. Medical education itself is under scrutiny by faculties attempting to conserve time and yet maintain standards of excellence.

A recent editorial highlights the situation that is developing with respect to the family doctor. In 1930 about 69% of students chose this field for their life work; in 1960 only 35%. This in itself will make it necessary for communities to establish some reasonable limit to the responsibility of the physician with respect to both the screening and care of the social ills and ailments that are being placed on his shoulders. The humble illustration of the sick child was drawn from the experience of a conscientious doctor in a small community. He responded to the call but found that the real reason for the vomiting and pain was an angry dispute between the child's parents. After a busy day he had to stay until long past midnight in an effort to straighten matters out. An experienced visiting nurse or trained social worker, or even the wise neighbor next door might well have handled this situation.

Social Control

When scarcities of personnel and resources make it impossible for doctors to supply the health needs of a population, some device to meet wants may be countenanced by the poli-

tician even though the principles of sound medical care may be violated by it. The effort may be well intentioned but takes the form of token medical service as a means of keeping the people quiet. The *aequanimitas* of the healer assures the equanimity of the society by quieting the chain reaction of emotion touched off by the advent of illness. It is of passing interest to note the large numbers of women who have entered the health services of the Soviet Union. It is true that they are variously labeled as doctors, nurses, and social workers but they are used to perform surprisingly similar functions.

The social control function of medicine became visible in the United States in the period of the Great Depression. The cost of medical care moved into the spotlight and brought forth the report of a privately sponsored Committee on the Costs of Medical Care (1932). Although "millions of our people" now may be "dissatisfied with the medical care they are getting," they have not as yet marched on Washington. It is not commonly recognized that medical wants and even hospital bed occupancy rise and fall with the stock market.

Health as a Right of All

As I have implied, one of the basic changes of the present century is the transition of medical care from an ancient practical art toward an applied technological science. Medicine for the first time in its long history has come into possession of powerful tools. Because these tools are of value only when applied with professional skill and learning, it may be said that the profession holds a monopoly on their use. This is highly significant, in view of the fact another change has been the conversion of health from a privilege of a favored few to the right of all. This phenomenon dramatically came to the surface during World War II in England. It precipitated their National Health Act—although this was the culmination of a series of events underway for several decades. Climactic events of the war and the "share and share alike" attitude of the people—not the words of Aneurin Bevan

—nationalized English medicine. T. F. Fox, editor of *The Lancet*, recently stated ". . . the principle underlying health service 'to each according to his need' has now come to seem so natural that most of us are quite shocked when we see anyone relating medical care to the patient's capacity to pay."

This principle was written into the charter of the World Health Organization. If for no other reason than the consideration of social control, it has become of imminent concern in the implementation of our national policy in aid to developing nations.

The Developing Nation of India

When one turns to the developing nation of India the illustration of the sick child becomes irrelevant. In a remote rural village there is no telephone, no doctor, children frequently vomit and complain of abdominal pain and very often children die. Nature makes provision for this happening by having another child on the way. And certainly the illiterate mother has never heard of appendicitis. The thought goes through her mind that if fever sets in, the long overdue offering to Ganapati must be made.

To the people of rural India sickness is as much a moral as a physical crisis. According to the cultural system of the person, symptoms of physical disability are connected to moral weakness by a chain of convictions involving nutrition, blood, semen, and transgressions of the ethical code. Ideal remedies for symptoms include pilgrimages and ritual baths to wash away one's sins—atonements rather than tonics—Ganges water, not typhoid vaccine.

The health wants of this vast population are by no means focused on its medical profession. Nevertheless, the mind of the alert politician has grasped the significance of the symbol of the healer as an agent of social control. Irregular practitioners outnumber regular doctors ten to one in India. Herb doctors, homeopaths, hakims, witchdoctors and many others are free to practice their arts and flourish among the illiterate agricultural peasants.

I have implied that the toleration of irregular practitioners in rural India is at least in part a realistic device to maintain social control. For documentation I cite a little known comment by Gandhi himself. It was published in his "Young India," in 1925, and gives his frank evaluation of Ayurveda, the great school of herb doctors.

"Had I been absolutely hostile to the movement," Gandhi wrote, "I should of course have declined the honour [of laying the cornerstone of the Ashtanga Ayurveda Vidyalaya in Bengali] at any cost . . . I hope the college will contribute to the alleviation of real suffering and make discoveries and researches in Ayurveda that will enable the poorest in the land to know and use the simple indigenous drugs and teach people to learn the laws of preventing disease rather than curing them . . . My quarrel with the professors of Ayurvedic system is that many of them, if not indeed a vast majority of them, are mere quacks pretending to know much more than they actually do . . . They impute to Ayurveda an omnipotence which it does not possess, and in so doing they have made it a stagnant system instead of a gloriously progressive science. I know of not a single discovery or invention of any importance on the part of Ayurvedic physicians as against a brilliant array of discoveries and inventions which Western physicians and surgeons boast . . . Let our Kavirajis, Vaidyas and Hakims apply to their calling a scientific spirit that Western physicians show, let them copy the latter's humility, let them reduce themselves to poverty in investigating the indigenous drugs and let them frankly acknowledge and assimilate that part of Western medicine which they at present do not possess."

And so Gandhi, the living symbol of the simple virtues of the Indian way of life, knew well the worthlessness of the remedies being peddled to village folk. He himself exhibited the symbol of the spinning wheel, as obsolete as the herbal remedies. I trust that my Indian friends will forgive this dissociation of the political alertness of the young M. K. Gandhi

from the spiritual teachings of the mature Gandhiji.

Economic growth however means the building of a new society. It is our national purpose, as well as the dream of Gandhi, that the concept of human dignity be built into these societies as they develop. The needs for medical care are obvious. They crowd in from all sides. Hopes and demands for medical care are rising.

For the political economist to measure the allocation of the aid dollar solely in terms of income generating investment or to insist on a demonstrable effect on the gross national product may be penny wise but pound foolish. As someone has said: "Accept Copernicus and Voltaire is inevitable."

I have selected as a contrasting illustration of contemporary medicine in India, the arrangements for the 1960 great Hindu religious pilgrimage to Allahabad in the State of Uttar Pradesh as described by A. Leslie Banks, Professor of Human Ecology at the University of Cambridge. On the main bathing day at the confluence of the Ganges and Jumna there was an attendance of four million pilgrims. It was from this festival above all others that the great pandemics of cholera have spread in the past. Pilgrims arrive from all directions by rail, river, bus, bullock cart, bicycle, tonga or on foot.

The camp area prepared covered 35 square miles. In 1960 the sanitary and medical arrangements planned and carried out (under the direction of Dr. K. M. Lal, Director of the Uttar Pradesh State medical and health services) were so efficient that no case of infectious disease arose. In 1954 the festival was the scene of a tragedy when several hundred pilgrims were crushed to death. In 1960 only a variety of minor injuries were reported.

The magnitude of this accomplishment can be gauged by recalling the scene at one of our major sports events and then picturing four million poor, superstitious and illiterate but not unintelligent rural folk crowding in for a dunk in a small muddy river.

Public and Individual Preventive Medicine

In developing nations the application of health measures logically takes place in sequential phases. The situation in each area thus calls for separate appraisal. Public health measures and sanitation applied at the community or mass level permit the urbanization essential to economic growth and they control such inhibitors to agricultural development as malaria. These primary measures can be expected to yield the greatest good to the greatest numbers at minimal fiscal outlay.

Mass inoculation against cholera, as applied to the Allahabad pilgrims, is an example of one component of preventive medicine that allies itself naturally with public health. In many developing areas, and Uttar Pradesh is one, the public health phase largely has been accomplished or competently planned. In our own nation, of course, public health, sanitation and allied forms of preventive medicine are in a mature and continuing phase.

There is another component of preventive medicine coming into mature societies that naturally allies itself with curative medicine because it is applied at the individual rather than the mass level. This is a relatively new concept and has gained ground slowly in actual medical practice except for periodic health examinations. Wholesome advice about habits of living is not generally accepted by American people until they have felt the twings of disease. Nevertheless, increasing emphasis on individual preventive medicine may be expected as the understanding of degenerative diseases and their complications provides a specific factual foundation. This shift of emphasis may well be one more factor in bringing new patterns of organized effort into professional practice. It will both increase legitimate wants and require greater cooperation in practice.

The following statement written by Dr. Frederick T. Hatch, Chief of the Arteriosclerosis Unit at the Massachusetts General Hospital, provides illustration. The members of a large hospital staff were recently invited to submit free wheeling comments on the events that are having an impact on the activi-

ties of medical practice and consequently on adaptive changes that may be anticipated. Dr. Hatch wrote as follows:

"Arteriosclerosis, the greatest current health problem of the civilized world, presents a major challenge to Medicine. This disease—in particular its involvement of the coronary arteries—is showing an alarming tendency to invade the third and fourth decades of life in males and the fourth and fifth decades of life in females . . . the accumulation of relevant knowledge in the biological and medical sciences is advancing faster than ever before. This rate of development virtually assures us that the basic information necessary for understanding the mechanism of production of arteriosclerosis is now, or soon will be, available. One may therefore anticipate the future need for large scale clinical trials of new measures for prevention or treatment . . .

"Of immediate, indeed current, importance is the probability that individuals with a high risk of developing the complications of arteriosclerosis can now be selected and managed in accord with this new knowledge. The U. S. Public Health Service Study, at Framingham, Massachusetts, and other studies now indicate that male subjects who exhibit, even in mild degree, two or more of three abnormalities—obesity, hypertension and elevated blood cholesterol—have about 10 times greater risk of coronary disease than subjects with no one of these abnormalities. Thus the high-risk individual selected on the foregoing basis appears to have a 50 - 50 chance of actually having a myocardial infarction between 45 and 65 years of age. These high-risk subjects are not at all uncommon in our population.

"Thus, a combination of biochemical, clinical and genetic information may permit in the near future a fairly accurate estimate of the risk of coronary disease in an individual subject. Evidence now available suggests that management of the nutrition of susceptible individuals sometimes combined with drug therapy, will correct the metabolic abnormalities and perhaps arrest the progress of arteriosclerosis. It seems reasonable to anticipate that

the application of such preventive measures may soon become rather widespread for the protection of a large number of individuals between 20 and 60 years of age.

"The proper application of the combined nutritional and pharmacological approach to prevention of ischemic heart disease will require long-term observation and reinforcement. It seems likely that the complex requirements for assessment of risk, and clinical and nutritional control will necessitate the organization of cooperative enterprises which have not generally been a part of medical practice. Individualized preventive medicine may thus become in the foreseeable future one of the most important contributions of the internist and general practitioner."

I will remind you that this was written as a privileged intraprofessional communication—not as an appeal for funds or publicity. Should Dr. Hatch's hypothesis prove correct and the need is established to make individual preventive medicine of this order available to large numbers of the people, the profession will be faced by an unprecedented problem.

Summary

In a mature nation in an era of high mass-consumption, health wants expand and needs relatively are diminished. The key supply of manpower is expensive to educate and is not subject to rapid expansion, particularly in view of the great weight of the factor of quality. Full, effective and wise use of manpower and resources for needs will be required by a rising population. Organizational changes within the profession directed toward this end may be anticipated, and the nature of some of these changes is already discernible. Acceptance by the community and cooperation of the individual are necessary.

In developing nations visible needs far exceed expressed wants. With economic growth needs will multiply and wants increase. These may be met at first by public health and mass

preventive measures. Individual rational medicine, both curative and preventive, cannot long be delayed. These measures build human dignity into the new social order and are essential to social control. Health measures can be phased into a developing economy at the rate they will be accepted by the people.

The health wants and needs of our mature nation have been placed in juxtaposition with those of a developing nation. Only by such a perspective can the health professions appraise their abilities to contribute directly or indirectly to the national program of aid. The problem of scarcity hovers over the area of health despite and in part because of the era of mass-consumption into which our society has moved. In no other area of activity is it more essential to apply the national policy of helping those nations that give evidence of helping themselves. Professional undertakings must be wisely conducted and maximally productive. Allocation of scarce manpower to direct participation abroad will require acceleration of organizational adaptations at home to meet internal needs. Scarcities in resources, which in the field of health are met by the educational system itself, call for strengthening of this effort.

Conclusion

The basic strength of a mature economy is found in the ability of its citizens to cast aside outgrown and rigid organizational models and adapt themselves to change. The basic strength of a developing economy is not measured by the gross national product, its heavy industries, or by its coal and oil reserves. Here also, it resides in the human factor. It is man himself who brings his society into being and preserves his right to change it as he sees fit. A sound and healthy citizenry is the prime requisite to create, staff and run a modern nation and bring about adaptive change by lawful means.

32 Fruit Street

"I conceive it the office of a physician not only to restore the health but to mitigate pain and dolours; and not only when such mitigation may conduce to recovery but when it may serve to make a fair and easy passage."

—FRANCIS BACON, *The New Atlantis*

Thoughts on the Care of *The Hopelessly Ill*

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Neither lengthened human life span, nor the multiplication of drugs and other measures which have helped to produce it, have relieved the doctor of patients who have hopeless disease. For centuries, the care of the dying has been discussed by medical men, clergymen, laymen. Too often only one facet has been considered, "should one tell?"—although, at times a more general approach has been attempted. While there are no problems in medicine which cannot be faced, there are few which can less readily be settled, and it is the purpose of this essay to suggest rather than to state; to provoke discussion rather than to define. A physician dare not presume to offer solution in the form of precise answers to matters which are so variably, so intensely individual. I venture to set down a few guiding principles, even these not always valid, which have been helpful to me.

When death appears to be inevitable, should the patient, or the family, be told? Before one decides, it is well to ask: "how sure are we

of the outlook?" For example, in a woman of forty-five, the diagnosis of scleroderma was made, clinically and by biopsy in 1944. The sections were recently reviewed and the diagnosis was correct, but the multiple lesions receded and the woman is well. Fortunately, no prognosis was given. One of my many mistakes is described briefly:

● A seventy-year-old lawyer was admitted to the hospital comatose, hemiplegic. In the next twenty-four hours, he developed high fever, auricular fibrillation and pulmonary oedema. The spinal fluid was grossly bloody. I gave the family a verdict of "no hope." He recovered and practiced at the bar with minimal residual damage for two years.

I am sure that these experiences are not

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unique. After all, the spontaneous remission of proved carcinoma has been many times recorded.^{1, 2} One needs to walk very, very softly.

It may not be generally appreciated that any sort of "telling," or "showdown" is rarely necessary. It is frequent for the patient and his physician to reach an understanding at a deep level of communication below and without the spoken word, with questions unasked, and no facts given. In my experience, this has been so usual that I have come to rely on the development of this understanding, and I have rarely been disappointed. Hence, there should be special reasons, special circumstances, which call for outspoken frankness to the patient. A relatively simple problem occurred recently:

- An old man who had been ill for some years with coronary disease developed a myocardial infarct. The signs indicated a poor prognosis. When I placed him on the danger list, his wife told me that a new will was to have been signed that same afternoon, and that it was imperative that it be done. I consulted his lawyer who verified her statement and, although I am sure that the patient learned thereby the gravity of his danger, the will was signed.

There are occasions when the patient should have the opportunity to arrange personal, or spiritual matters more important to him than finances, and cautious questioning must precede a decision to tell or to be silent. When a patient looks at me squarely and asks the truth, I tell it. I try to provide some hope and reassurance (*vide infra*) at the same time but, if under similar circumstances I know that I should wish to be told, I tell.

Unless specifically forbidden by the patient, the family should be informed of the facts as one sees them. One takes the risk, if the patient has been left untold, that some unreliable person (often a "fringe" family member) will deliberately, or inadvertently, spill over, but if the transaction between doctor and patient is pursuing its normal course, the damage may still be small.

At this time, regardless of who is or is not informed, and no matter how confident I am

of the facts, I invariably request a consultation. The patient rarely objects, the family is generally pleased, and besides bolstering his confidence, the physician sometimes gains some useful hint (who of us does not have little unwritten trade secrets which are at times helpful?). Most important, however, is that a consultation at an early stage of the illness may keep the family from developing panic at the end, seeking doubtful advice in distant places. Dr. Gerald Miller, Associate Professor of Pediatrics at the University of Rochester, allows me to report for him from his extensive consulting experience with leukemia and lymphoma in children. When a family is unable to accept a poor outlook, Dr. Miller urges them to get an opinion from a hematological group in some other city, furnishing, of course, such material as may avoid repetition of painful or extensive measures.

When a patient has to be told, the young physician may have difficulty in making himself clear. Current emphasis in medical schools is heavily on the interview, on listening to the patient. This is all very well in the period in which diagnosis is being made, but the physician should be able to convey unpleasant facts with sympathy, with clarity and with dignity, and this art is not cultivated during the in-hospital years. It can be learned in part by example, and I sometimes invite a student, or intern, to hear such a talk, though it is usually best done between two people only. Talking to patients must fundamentally be learned by doing it. I have made errors in not being frank; for example:

- A woman of seventy had radical amputation for a breast cancer. She knew the diagnosis and asked me to tell her if there were signs of recurrence. Three years later, she began to lose weight and some probable skin metastases appeared. Her three children insisted that I procrastinate, and weakly, I did. She became suspicious, sought another opinion, and left my care, feeling she had been betrayed.

It is difficult to predict what help religion will be in a fatal illness. I believe that it is the doctor's duty to ensure the patient an

opportunity to find values in spiritual areas, even though previously they may seem to have been crowded out by material things. The formal rites which the Catholic church prescribes for the sick are an admirable starting point for this process, and the assurance of the priest-patient relation has great value. In the other faiths, more depends on the individual character of the minister; this makes his task more difficult. In our hospital, we are fortunate to have had a succession of chaplains — Catholic, Jewish, Protestant — who have spread comfort and sometimes cheer through the wards, not limited to patients of their particular faith.

I make an effort to explain the facts of illness as I see them to the responsible clergyman. I find that many patients are given material as well as spiritual support from him and his congregation.

Unexpected help may result from religious counselling:

● A minister made a call on a woman who had recently moved to his parish, but who had not attended services, and found her unable to walk. Her illness, she told him, though not fully diagnosed, was considered permanent and progressive. "It looks," said the clergyman, "uncommonly like what my niece has, and that is multiple sclerosis. Why not get another opinion?" The reverend gentleman did better than he knew. It was, in fact, sub-acute combined degeneration and, under treatment, she recovered.

There is an art in managing the hopelessly ill. I list a few things which I have learned. If the disease is cancer and the patient knows or suspects, it is important to make clear at once that there will not be severe pain. Cancer has for long been synonymous with a nightmare of suffering, and this fantasy needs to be dispelled. Patients not only fear pain, but are also concerned about their ability to endure it. This does not mean that one is to prescribe narcotic or tranquilizing drugs before they are needed. The reassurance the patient must have is that help will be given if needed. What drugs SHOULD be used? If there is marked anxiety,

frequent opportunities to talk with the doctor come first, but perhaps some sedation is also in order. While in such an illness the complications of the phenothiazine derivatives (jaundice, blood dyscrasias, neurological damage) may be degraded in importance, I enter a plea for a trial of barbiturates, even of bromides, before more expensive drugs are ordered, (advertising manager, please do not read the last sentence). The placebo quality of all drugs is well recognized, and I see no reason to start with a ten-cent capsule. If an older patient on phenobarbital is transiently foggy, what of it? This is in part the desired effect.

Pain and dyspnea must be relieved, and it is hardly necessary to say that codeine and aspirin should be tried before meperidine, and meperidine before morphine. Whether any of the morphine derivatives, or substitutes, are really less addictive is unproved, but we all have our (uncontrolled) experiences. (I like Levo-Dromoran®). Using liquid prescriptions rather than rigid-dose tablets has been useful and, of course, allows the addition of small doses of chloral or barbiturate. When narcotics are regularly administered, the phenothiazine derivatives may be potentiating. It is often possible to postpone hypodermics until the terminal weeks of the illness.

Provided it is done gradually, it may be possible to relax a restrictive treatment schedule, always remembering that, if the bars are let down too suddenly, the patient may take it to mean, "He is giving me up." Beyond what a patient finds he can eat, there is no value in diet in stomach cancer. There is little use in limiting protein in terminal uremia. While control of extracellular fluid is essential for the cardiac's comfort, some relaxation of salt intake seems at times to have done no harm and to have produced a better food-intake. I recall that, in the last week of illness of a patient with widespread malignant disease and constant vomiting, she asked for, ate with relish and digested a boiled lobster!

Perhaps it is my age that makes me attentive to bowel habits in my patients, perhaps it is because they are so often neglected by juniors.

The "chronics," cardiacs, patients with cancer, or cerebral insufficiency, are often distressed by constipation. This is especially so when opium derivatives are needed. I have found it worthwhile to study each patient's problem, and to try to arrange a plan of laxatives, or enemata, to suit.

The doctor-patient relationship of the hopelessly ill is of the utmost importance to both participants. Whenever possible, a single physician should be in charge. When attendance at a tumor or radiation center, or a hematology clinic, is necessary, there is often divided responsibility and divided allegiance. Patients consciously, or unconsciously, may play one doctor against another, may misinterpret, may distort what they hear, or see, in the hospital. Discussion of the problems of multiple transferences is beyond the scope of this paper, but those in charge of treatment centers should constantly remember that, if they allow their role to be other than formal and consultative, they may interfere with the essential position of the family physician. Meticulous attention to communication between clinic and doctor will reduce this threat. It is well that all prescriptions be written by one physician for obvious as well as psychological reasons.

One of the greatest comforts for the dying is to be left at home. General hospitals are unhappily places where house staff probe and test, where nurses though not unkind are indifferent, where in brief, the "crock" is a second class citizen. To be in one's own bed, to have quiet and good light, comfortable temperature, books, tasteful food and drink served at reasonable times, this is the final boon a family can give their loved one. Dr. Henry Sigerist expressed this similarly a few years prior to his death.³ It is sometimes impossible, but with the help of friends, visiting nurses, perhaps a night nurse, it can often be managed. Professional nursing is expensive but, if cost must be considered, it can be balanced against the useless x-rays and laboratory procedures and the other extras one finds on hospital bills.

How long should one continue to fight for the patient's life? A simple answer is, "as long as it

is for the patient's good," but this leaves a great deal unsettled. Any complaisance we may have felt towards euthanasia should have been changed by the Nazi horror. "It started (the killing of the unfit) with the acceptance of the attitude, basic in the euthanasia movement, that there is such a thing as life not worthy to be lived."⁴ Yet there comes a time in almost every illness when one must balance the value of prolonging treatment against the physical distress and the financial burden which it may involve. Apart from real physical improvement, the routine of deep radiation or other tumor-destroying processes at first gives comfort and hope and may actually sustain a patient and help him maintain face. It is easy to let it continue, ignoring the law of diminishing return. If a radiation program is to be abandoned, it must be done with finesse, so that the patient does not seize on this to mean, "they have given me up."

An even stronger stand should be taken against last-ditch measures. I recall with disgust a total colectomy in a woman (not my patient) moribund from ulcerative colitis. It COULD and DID hurt her, and the one in a million chance of success did not justify it. A similar instance of mis-treatment by medical means is outlined;

• G. R., seventy-seven, had nephrectomy for pyonephrosis which disclosed a reticulum-cell tumor involving the kidney and retroperitoneal structures. His fever continued and he became uremic and developed auricular flutter. My treatment was aimed at his comfort, and with this a consultant agreed. However, his physician-son and his daughter thought this inadequate and transferred him to another physician's care. He survived two days of antibiotics, steroids, fluids. At postmortem, there was tumor in liver, spleen, lungs, adrenals, bone-marrow and the remaining kidney.

These are extreme instances, but we must remember that patients and their families are constantly exposed to sensational reports in the newspapers, and to even more misleading material in weekly and monthly magazines; the

product of "science writers" whose facts are often distorted, after being obtained from publicity-hungry investigators. Most distressing is the urge to run to distant places after *lusi naturae*. The precautionary measures against just this, taken early in a fatal illness, may prove themselves towards the end. In any case, the physician must tread the narrow path between being thought unwilling to face further opinion, and protecting his patient against discomfort and even exploitation.

After a patient's death, the family need continuation of care. When an illness has been lengthy they often express relief at its conclusion, which should not mislead the physician into neglecting grief and guilt, almost invariably there. Simple reassurance helps and this is furthered by a call, or even merely a letter, but is often best provided by an autopsy. In patients who die at home, permission for postmortem will be granted in about twenty-five percent, or slightly more than half of those asked,⁵ especially if a university, or hospital, department of pathology will do the examination without charge.

While the information obtained in cases of chronic heart disease, cerebral damage, or cancer, is rarely striking, it usually allows the physician to assure the family that neither earlier diagnosis and treatment, nor

last-ditch medical experiment would have altered the result. Permitting an autopsy is at times a symbolic sacrifice as well, and occasionally unexpected findings may give comfort. It is important that the results be told to the family promptly and, here again, clear language must be cultivated. When after a hospital death, the postmortem letter is left to the house staff, it is well for the attending physician to make sure that it has been done, and to review it for clarity, preferably with the responsible resident. I always offer the family an opportunity to talk with me as well.

Statistics are always impressive, even though they may add little. Some years ago, I reviewed the success of treatment in twenty-nine consecutive cases of hopeless disease under my care. The criteria, of course, were subjectively weighed, but I included the physical and emotional comfort of the patient, and of the family, and my tolerance of the strain. In fourteen cases, I considered the result satisfactory, in nine indifferent, and in six poor. These six included one suicide, one case of gross over-radiation with skin necrosis, and the instance I cited where I followed the bidding of the family rather than of the patient. Fifty percent is not an impressive figure, but if valid, represents a step towards the accomplishment of Sir Francis Bacon's precept.

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STOP AT CORONER'S CORNER . . .

Read the stories doctors write of their unusual experience as coroners and medical examiners.

SEE PAGE 50a

We are all psychotherapists . . . because our patients cast us in this role. You can hardly help giving something of yourself at every meeting with a patient, with every history you take, with every physical examination you do. And along with every pill or prescription, you dispense a bit of yourself . . .

Plain Talk About PSYCHOTHERAPY

WILLIAM F. KNOFF, M.D., Syracuse, New York

Our text is psychotherapy; not Psychotherapy and the *Psychiatrist*, but Psychotherapy and the *Physician*.

Actually, all doctors are psychotherapists in some degree — and all know considerably more about human behavior, interviewing techniques, and the doctor-patient relationship than they are consciously aware of.

Inasmuch as these concepts, "psychotherapy" and even "the physician," for that matter are rather vague, I think the best way to approach this subject is under three headings:

- I. You, The Doctor
- II. The Patient
- III. You And The Patient

We will say something about doctors, and something about patients. We will also discuss what happens when doctor and patient meet, thereby commencing an interpersonal relationship which is older than Hippocrates, an interpersonal relationship which *can* be our heritage today. Stated simply, this consists of two peo-

ple: one, a healer and the other, a suffering man.

Definition

Before plunging in, let's define what we are talking about. Psychotherapy is the fusion of two Greek forms, "psukhe" for mind and "therapeia" for healing—the latter is also derived from another Greek word, "theraps," for servant. Mind-healing, then, is accomplished by collaboration between two minds—without intervention of electricity or pharmacologic substances and with a minimum of unwitting hocus-pocus.

In discussing psychotherapy in this *broad sense*, I would like to tell you about something you can use, something you can put to work tomorrow morning, if you have not already done so. Intensive psychotherapy, a definite kind of operation which is a skilled refinement of the doctor-patient relationship and practiced by psychiatrists and psychoanalysts, cannot be

fully developed here, though it is only an elaboration of basic principles which I will try to outline.

I like best the simple all-inclusive definition of psychotherapy contributed by Jurgen Ruesch: when doctor and patient meet, the events which ensue constitute psychotherapy. The patient is a person who somehow knows that he is failing in his living and the doctor feels that he knows something about failure, so it is understandable that these two should conjoin. Now, with a definition under our hat we can proceed to talk about:

I. You, The Doctor

Having stated that doctor and patient *should* conjoin, the first point I want to make about You, The Doctor, is that today, doctor and patient too often do *not* conjoin. In an age of specialization, technological fireworks, heavy patient load and headlong time-engulfing "busyness," doctor and patient are conjoining less and less and the meaningful doctor-patient experience is dwindling in medicine.

The doctor-patient relationship in 1961 is not quite what it was in 1861 when the New England psychosomaticists understood what it meant to communicate with a patient. Nor is it quite what it was in 400 B.C. when Hippocrates understood what it meant to know a patient not as a disease but as a suffering *person*.

So, as is often the case, we rediscover the past, and, in 1961, we throw our hats in the air about our *modern* psychosomatic medicine

ABOUT THE AUTHOR

A graduate of Syracuse University College of Medicine, the author received his residency training in Psychiatry at the Institute of Living, Hartford, Connecticut, following which he became engaged in full-time teaching, research and training at his alma mater, now the State University of New York, Upstate Medical Center in Syracuse. He holds the post of Associate Professor in the Department of Psychiatry.

and our *modern* concepts of the total person only to find that they have been around a long time. T. S. Eliot, in "The Cocktail Party," has the psychiatrist say at one point:

" . . . my patients are only pieces of
a total situation which I have to ex-
plore . . . "

"Pieces of a total situation"—you could frame that and hang it on the wall of your office. You could organize your practice of medicine around that.

Disease-Centered

In treatment today we are becoming too disease-centered, too doctor-centered, too hospital-centered. By these other interests we are distracted from being patient-centered. In a very real sense the patient is becoming the forgotten man. Patients, it seems, like children, *should be seen*—preferably while tucked in securely in a bed—thoroughly poked, x-rayed and bled—but *not heard*—except, perhaps, in the filling out of a history form of epic proportions which is, nevertheless, largely disease-centered and leaves hardly a single breath for the patient to say what he urgently needs to say to someone about his troubles and desires.

Nevertheless, almost all doctors are strongly motivated toward helping and easing people. Unconscious motivation for this may have devious roots (a need for power, the satisfaction of curiosity), but personal drives, whatever their nature, should never be allowed to involve the patient for the doctor's ends.

Our feelings can cause us to become over-committed: too sympathetic, too paternal, protective, God-like, or, on the other hand, hostile, perhaps even subtly threatening.

The doctor must accept the fact that everything he does and says to the patient, and some things he does not say or do, have a psychotherapeutic effect which may affect rapport positively or negatively. A momentary detached look, a tapping foot, or a "hmmmm" at the wrong time, may undo an hour's productive relationship.

Now, who does psychotherapy? Any physician, whether he is a general practitioner or

a specialist in neurosurgery, can and should have a psychotherapeutic point of view. In fact, we are *all* psychotherapists whether we like it or not because our patients cast us in this role.

You can hardly help giving something of yourself, you know, at every meeting with a patient, with every history you take, with every physical examination you do. And along with every pill or prescription you dispense a bit of yourself. All of the specialists and generalists should be able to recognize and deal with the emotional aspects of the problems with which they deal.

In medical school or afterward, one's training ought to include fundamental principles of human behavior, familiarity with emotional disorders and clinical contact under supervision. Of course, there have always been those good doctors among us who by their patience, tolerance and wisdom, have succeeded in helping their emotionally troubled patients without any formal knowledge of psychodynamics but by being "simply more human than otherwise."

II. *The Patient*

Now we turn our attention to this uneasy man or woman who seeks you out because you are the one who can help. Statistics indicate, for those of you who like statistics, that at least a third (and some estimates go as high as three-fourths) of patients who enter doctors' offices do so for emotional problems. So you might become a dermatologist or a radiologist to try to escape from these entangling people, but there is no hiding place; if your lot is that of most physicians, they will constitute the bulk of your practice.

When I think of patients, I think of all the kinds of humanity that daily stream in and out of doctors' offices: intelligent people, dull people, the unhappy, the confused, the suspicious, hostile people, dreamy people, the demented and the sad—people in physical pain and in emotional pain, guilty people, anxious people—even you and me.

More often than not, your patient is appre-

hensive, tense and fearful as he literally puts himself in your hands. During a recent discussion, I was pleased to hear a medical student say, "You know, it's hard to be a patient." I think he was referring to his awareness of the enforced passivity, the submission, and the feeling of helplessness that is a part of the experience of being a patient.

When the patient first consults you he may re-experience a childhood relationship to an authority figure—this time the doctor—and old anxieties and resentments are rekindled. Awareness of the quality of the rapport, either positive or negative, is important to the doctor in handling this operation which we call the doctor-patient relationship. Through this relationship the doctor will be able to assess the patient; his inter-personal problems, his personality structure, internal and external stresses and his ways of meeting them which constitute his "illness." In addition, psychological testing may prove to be a useful adjunct in assessing the patient.

Few Psychiatrists

The question which now occurs to you may be: What kinds of patients should I consider for a psychotherapeutic relationship? The answer to this question, like our definition of psychotherapy, is broad, perhaps surprisingly broad. Ebaugh has stated that most psychotherapy should begin in the family doctor's office and most should end there.

Psychiatrists are few in number, absent from small communities, and moreover, can carry on intensive psychotherapy with relatively few patients (for a psychoanalyst, eight patients is a full-time load). The great bulk of psychotherapy—psychotherapy for the minor and for the moderate disturbances—is the job of other doctors. The psychosomatic disorders, whose name is legion, fall particularly well into this group. The anxiety states, and other neuroses not associated with serious depression or severe obsessive compulsive symptoms, form a large percentage of every physician's practice and, in most cases, can be adequately helped. Also in this group is the alcoholic, who must be recog-

nized for his underlying neurosis or character disorder of which drinking is only a symptom. The acute delirious states, as well as the chronic organic reaction types in older people requiring primarily supportive therapy, also fall within the province of the non-psychiatric physician.

The difficult undertakings in which referral is indicated include the schizophrenic and manic-depressive psychoses, the character disorders formerly known as psychopaths, and chronic neuroses.

III. You and the Patient

Now we come to the heart of the matter: psychotherapy as a specific kind of operation. It is here, in the *constructive doctor-patient experience*, that psychotherapy is done. What happens when doctor and patient get together? What is the constructive doctor-patient experience? Psychotherapy is essentially a knowledgeable doctor-patient relationship conducted at the interview level. The interview, then, is a useful diagnostic and therapeutic tool. Differential diagnosis is beyond the scope of this short discussion. However, specific formulations are not always necessary and are even undesirable because they tend to pigeonhole people, or hang labels around their necks which imply social stigma.

Turning then immediately to therapy, we note first that the doctor-patient experience begins not when the patient walks in the door but when the patient first decides to see the doctor. He has already been thinking about you and relating to you in fantasy before you shake his hand. How do you receive him? Do you put yourself at ease? Do you put the patient at ease? The manner in which you take the history and do the physical examination, will bear importantly on the kind of relationship which evolves between you.

Observation

Throughout the introductory procedures you should use all of your powers of observation, all five senses—and not a little of the sixth—in studying his person and his behavior. Note

how he looks, what he says, the rhythm and inflection of his voice, what he does not say, and when significant silences occur. Keep your ears open for hidden meanings and never forget that basic postulate: conscious behavior is unconsciously determined. Ask yourself: what role does he seem to be playing here? What are his feelings?—anxiety, resentment, guilt, dependency longings?

In assessing the patient, I am often reminded of the familiar railroad warning sign, "*Stop! Look! and Listen!*" This seems to me to be an easy way to remember three crucial factors in psychotherapy: *Stop* with the patient long enough; *observe* the patient with all your powers of perception, and *facilitate communication* from the patient to you. Good psychotherapists are good listeners.

Plan of Therapy

Once you have established, on good medical grounds, a psychogenic hypothesis for the illness, it may be necessary to broach this to the patient if he has not already proposed it to you. And, if you have been a good listener, letting the patient unwind to you, you will be surprised how infrequently you will have to take the initiative in this. Having decided that psychotherapy can help, you will want to assess his willingness to undertake this form of treatment.

You may wish to discuss with him your plan of therapy, where you are going, and when, with realistic *ameliorative* rather than *curative* goals, you plan to stop. Your estimate may vary anywhere from ten to one hundred, or more hours of interpersonal communication. And you are justified in discussing with him appropriate remuneration for this time investment.

During these hours, if you have decided upon expressive, uncovering therapy rather than so-called supportive therapy, you are going to try to understand, simply to understand—without criticism, advice-giving or impatience—the topics which he brings to the hours. Actually, psychotherapy is a shared effort in topical self-study and understanding—with all of the

darkness and uncertainty which that implies. But, as the Chinese proverb goes: "It is better to light one small candle than curse the darkness."

Your role in psychotherapy is that of an *accepting* person. Let me pause on that word *accepting*—what does it mean to be accepting? —it means that you are probably the first person in his life to accept the patient for what he is and to affirm his right to be that way. You are accepting and benign, a neutral listener who aids by word, gesture and attitude, the flow of communication.

Some familiar facilitating phrases used by therapists are, for example, "What are your associations to that topic?" or, "What would you really like to do?" or "I can understand how you might feel anxious (or resentful) about that."

New Insights

As the patient unwinds in this unthreatening atmosphere—commencing with his immediate life situation, his job, his family—he involves you in his life experience. Words become associated with feelings. He relives significant past events, but now in a uniquely structured setting, where sharing and support are available. You know, poets are a lot more succinct than the rest of us and I think W. H. Auden has put this very neatly in a poem about Freud:

" . . . he merely told

The unhappy Present to recite the Past
Like a poetry lesson, till sooner or later it
faltered at the line

Where long ago the accusations had begun
And suddenly knew by whom it had been
judged . . . "

So you see, the psychotherapeutic transaction is much more than a verbal exchange. If you stay with him long enough, a person comes to re-experience himself in this unique interpersonal relationship, to find acceptance rather than rejection, to find sharing and implicit reassurance rather than recrimination or exhortation. For the first time, he may be enabled to understand himself, able to look at both the painful and the happy aspects of himself with equal objectivity. By means of this re-educative emotional experience, new identifications, new reflected appraisals, new insights develop which enable his concept of himself and his perception of others to change. He is enabled to attain a previously unattainable mastery and fulfillment in living.

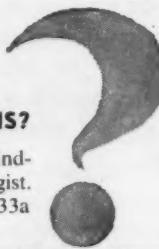
This about closes what I have to say about you, the doctor, your patient, and what happens when the two meet. Perhaps you will want to remember one thing: In order to practice psychotherapeutic medicine there is one fundamental requirement—that is, in the words of Harry Stack Sullivan, that you be "simply more human than otherwise."

766 Irving Avenue

WHAT'S YOUR DIAGNOSIS?

Read the film and compare your findings with those of a top radiologist.

SEE PAGE 33a



*A Clinical Study of the Use of
A New Iron-Carbohydrate Complex*

Iron-Deficiency Anemia

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JACOB HALPERIN, M.D., F.A.C.S.
Brooklyn, New York

The need for a safe, effective and inexpensive iron preparation continues to concern physicians treating iron-deficiency anemia, the most common nutritional deficiency disease of children in the United States.¹ Rapidly growing infants, premature babies, twins, and infants born after repeated pregnancies are especially vulnerable to iron-deficiency anemia.² Iron deficiency in the mother is also an important factor in nutritional anemia in infancy.³

Available therapeutic iron preparations have had many drawbacks, including unpalatability, production of gastrointestinal disturbances, staining of teeth and, in many cases, toxic reactions and death.

The toxicity of iron preparations, particularly among children, has been pointed out editorially.⁴ Ferrous sulfate tablets were involved in thirty-five non-fatal poisonings reported to the New York City Poison Control Center from 1957 until mid-1959.⁵ Cann and Verhulst⁶ reported five cases with three deaths) of iron poisoning of children recorded by the National Clearinghouse for Poison Control Centers. All of these involved tablets known or believed to contain ferrous sulfate. Hoppe and associates⁷ reviewed the literature and found seventy-eight case reports of iron poisoning, with death in thirty individuals. While ferrous sulfate was the causative agent in most, some of the deaths followed ingestion of

ferrous chloride, ferric chloride and ferric ammonium citrate. Aldrich⁸ reviewed forty instances of iron poisoning of children. Ferrous sulfate was the agent in thirty-nine and in tablet form in thirty-eight of these. He found that the mortality rate is about fifty percent, and that the margin of safety between the therapeutic dose and the toxic dose is smaller than previously thought. In fact, a wide range of doses was involved in cases of iron poisoning; from 4.8 to 18 gm. in fatal poisonings, and from 1.5 to 15 gm. in non-fatal cases. In view of these facts, the Committee on Toxicology of the American Medical Association⁹ stated that, "Iron sulfate and other iron salts, which have produced injury, may ultimately be replaced by safer iron compounds, provided the substitutes are equally effective and not too expensive."

The present report presents the results of a clinical study of the effectiveness of a new iron-carbohydrate complex (Jefron®)* containing forty-five percent iron, more than twice the amount in ferrous sulfate. The preparation is stable over a wide pH range (4

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* Supplied by Pitman-Moore Company, Indianapolis, Indiana, Division of The Dow Chemical Company.

Read at the Annual Meeting of the New York State Medical Society, May 11, 1961, Rochester, New York.

TABLE 1 DISTRIBUTION OF PATIENTS

GROUP	AGE RANGE	MALE	FEMALE	TOTAL
PEDIATRIC OUTPATIENTS	NEWBORN	12	14	26
CONTROL INFANTS	3-9 MONTHS	8	5	13
SEVERELY ANEMIC INFANTS	9-20 MONTHS	3	1	4
PRIVATE PEDIATRIC PATIENTS	8 MONTHS TO 10½ YEARS	8	9	17
OBSTETRIC PATIENTS	—	—	35	35
TOTAL		31	64	95

to 11), which favors its absorption after oral administration. Weaver and associates⁹ compared its effects on mice with those of exsiccated ferrous sulfate and other iron salts, as well as an iron polysaccharide complex and a ferroglycine sulfate complex. The iron-carbohydrate complex was the least toxic of any preparation given orally. No signs of toxicity occurred in mice given oral doses of the complex containing more than twelve times the lethal dose of iron as ferrous sulfate. The complex also is virtually tasteless, and does not stain the teeth.

Methods of Study

The study was planned to include patients from the prenatal and well baby clinics of the Brooklyn Women's Hospital, from the pediatric clinic of the East New York Dispensary and from private obstetric and pediatric practice (Table 1). Patients treated with iron-carbohydrate complex were considered in four groups: (1) newborn infants, (2) severely anemic infants, (3) obstetric patients and (4) private pediatric patients.

● GROUP ONE. (*New Born Infants*) Beginning four days after delivery, infants in this group were treated prophylactically with a daily dose of the iron-carbohydrate complex equivalent to 7.5 mgms. elemental iron and a multivitamin preparation; this dose to be continued until the infants were returned to the well baby clinic for a blood count at the end of the second month. At this time, the dose was increased to 15 mgms. of iron in the iron

complex, plus the multivitamin preparation. Further blood counts were done at the end of the third and the ninth month, and height, weight and data on the product's acceptability and possible side reactions were recorded. A control group of similar patients selected at random from the well baby clinic of Brooklyn Women's Hospital received only a multivitamin preparation.

● GROUP TWO. *Severely Anemic Infants* from nine to twenty months old and with hemoglobin levels less than 7.0 gm. percent were given 75 mgms. iron as iron complex. Data on hemoglobin level, weight and height as well as the acceptability of the product and the incidence of side reactions were recorded in the first, third, sixth and ninth week.

● GROUP THREE. *Obstetric Patients* with hemoglobin levels below 10 gm. percent were given iron complex in doses of one, two and three teaspoonsfuls per day, equivalent respectively to 100, 200 and 300 mgms. elemental iron daily. Blood counts were made every three months when possible, with a final count just before delivery or soon after. Because of the susceptibility of pregnant women to nausea, diarrhea, constipation and other gastrointestinal disturbances, particular attention was given to side reactions. Acceptability of the product to patients also was noted.

● GROUP FOUR. *Pediatric Patients in Private Practice* were given the iron complex in doses of 7.5, or 15 mgms., iron three times a day. These patients were from eight months to

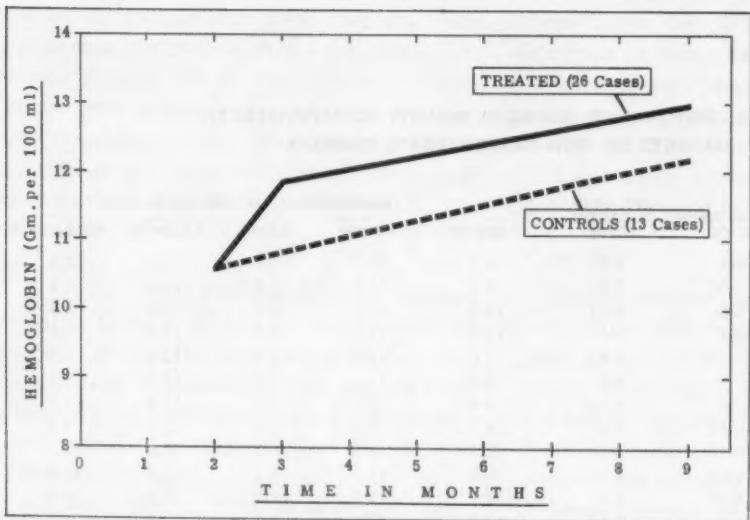
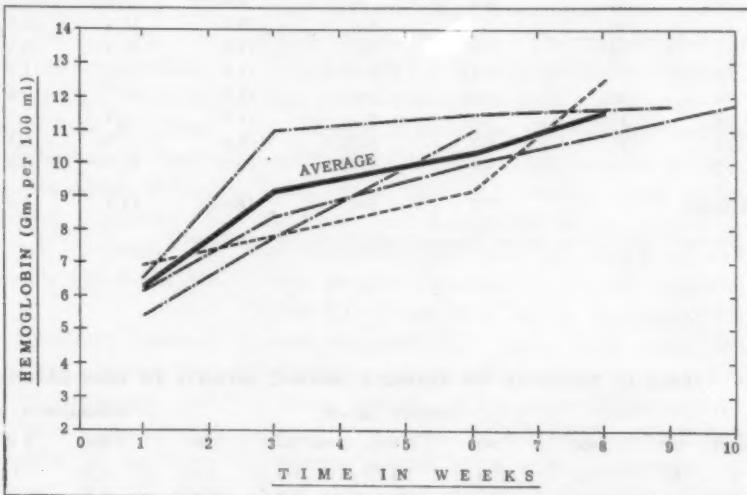


FIGURE 1 Chart showing the hemoglobin response of newborn infants to the iron complex.

FIGURE 2 Chart showing the hemoglobin response of severely anemic infants to the iron complex.



ten and one-half years old, and were under treatment for a variety of conditions. Anorexia, listlessness, pallor and underweight were common symptoms, with upper respiratory infection, allergy and jaundice in some. They were managed conventionally, and a multivitamin preparation was given routinely.

Results

- **GROUP ONE.** The hemoglobin level of the twenty-six *newborn infants* increased from an average of 10.6 gm. percent to 11.9 gm. percent, a net rise of 1.3 gm. between the second and third months (Table 2, Figure 1). The average gain for the first three months was

TABLE 2 RESPONSE OF NEWBORN INFANTS TO PROPHYLACTIC AMOUNTS OF IRON-CARBOHYDRATE COMPLEX*

PATIENT	SEX	WT. AT BIRTH LB.-OZ.	WT. GAIN 3 MONTHS LB.-OZ.	HEMOGLOBIN, GM. PER 100 ML.				
				2 MONTH	3 MONTH	GAIN	9 MONTH	TOTAL GAIN
1.	F	7-3	4-9	11.1	12.5	1.4	13.4	2.3
2.	M	8-0	5-8	12.3	13.8	1.5	14.1	1.8
3.	F	6-6	6-11	10.2	11.3	1.1	12.8	2.6
4.	M	9-4	4-0	11.0	11.5	0.5	13.5	2.5
5.	F	5-15	4-13	11.0	12.3	1.3	12.8	1.8
6.	F	7-3	4-9	11.0	11.5	0.5	13.5	2.5
7.	F	7-6	6-14	9.4	12.3	2.9	12.9	3.5
8.	F	6-12	5-4	9.7	12.3	2.6	13.9	3.9
9.	F	8-10	3-6	10.8	11.0	0.2	12.8	2.0
10.	M	6-12	5-5	10.2	11.3	1.1	12.9	2.7
11.	F	8-15	5-7	11.3	12.5	1.2	13.2	1.9
12.	M	6-3	4-13	11.3	12.9	1.6	12.6	1.3
13.	M	10-2	6-10	10.1	10.9	0.8	13.4	3.3
14.	F	6-15	7-2	10.7	12.3	1.6	13.6	2.9
15.	F	5-13	3-15	10.3	11.3	1.0	12.0	1.7
16.	M	8-2	5-6	10.0	11.5	1.5	12.5	2.5
17.	F	5-4	3-15	10.7	11.3	0.6	12.0	1.3
18.	M	7-0	5-4	10.2	12.3	2.1	12.9	2.7
19.	M	6-4	7-6	9.4	11.1	1.7	12.7	3.3
20.	M	7-11	6-4	10.4	10.9	0.5	11.6	1.2
21.	M	7-9	7-0	11.0	11.5	0.5	12.5	1.5
22.	F	8-13	5-5	11.3	12.5	1.2	12.8	1.5
23.	M	9-12	5-8	11.1	11.9	0.8	13.2	2.1
24.	F	5-8	5-11	11.1	12.3	1.2	14.1	3.0
25.	F	5-7	6-13	9.4	12.7	3.3	13.3	3.9
26.	M	5-7	3-11	10.7	11.5	0.8	12.8	2.1
Average		7-3	5-6	10.6	11.9	1.3	13.0	2.4

* Dose equivalent to 7.5 mg. iron daily first month and 15.0 mg. iron daily thereafter.

TABLE 3 RESPONSE OF SEVERELY ANEMIC INFANTS TO IRON-CARBOHYDRATE COMPLEX*

NAME	SEX	AGE MOS.	WEIGHT, LBS.-OZ.			HEMOGLOBIN, GM. PER 100 ML.				
			1 WK.	9 WKS.	NET GAIN	1 WK.	3 WKS.	6 WKS.	9 WKS.	NET GAIN
T.J.	M	18	27-8	30-12	3-4	6.5	11.0	11.5	11.8	5.3
S.W.	F	9	18	21-8	3-8	5.5	7.8	11.0	—	5.5
H.N.	M	18	25-12	29	3-4	7.0	—	9.2	12.5	5.5
R.J.	M	20	28-8	32	3-8	6.2	8.5	10.0	11.8	5.6
Average		16	24-14	28-4	3-6	6.3	9.1	10.4	12.0	5.5

* Dose equivalent to 75 mg. iron per day.

five pounds, six ounces (2.438 kg.). By nine months, the average hemoglobin level was 13.0 gm. percent, an increase of 2.4 gm. above the second month's level. The thirteen control infants who received iron only from dietary sources showed lower hemoglobin levels throughout the nine-month study; their net increase above the two-month level was 1.6 gm. (Figure 1).

● GROUP TWO. The four *Severely Anemic Infants* (Table 3, Figure 2) experienced an average increase in hemoglobin of 5.5 gm. percent in six to nine weeks. Their average level when the study began had been 6.3 gm. percent. They gained an average of three pounds, six ounces (1.531 kg.).

All the infants (Groups one and two) accepted the iron complex readily. There were no instances of vomiting, diarrhea, constipation or other gastrointestinal disturbance.

● GROUP THREE. The average hemoglobin increase for *obstetric patients* receiving 100 mgms. (one teaspoonful) was 2.5 gm.; for those receiving 200 mgms. (two teaspoonfuls), 2.2 gm., and for those receiving 300 mgms. (3 teaspoonfuls), 2.1 gm. (Table 4). Thus, there was no significant difference in results obtained with the three levels of dosage. Several patients reported subjective responses of "feeling better," or losing their "tiredness." All took the iron complex readily and found the flavor pleasant.

Although it was taken routinely between meals, there were none of the side reactions frequently accompanying iron medication, such as cramps, nausea, gastric upsets, diarrhea or constipation. No discoloration of teeth occurred.

● GROUP FOUR. The seventeen private pediatric patients (Table 5) were treated for from nine to twenty-seven weeks, an average of thirteen weeks. The fourteen who received 15 mgms. iron as iron complex, three times a day, experienced increases in hemoglobin level averaging 1.8 gm. percent, from 11.3 to 13.1

gm. The three who received 7.5 mgms. iron, three times daily, also had considerable increases in hemoglobin. All patients gained weight and height and improved in general body tone. In six, improvement in appetite or weight was exceptional.

Three cases representative of the entire group are reported in some detail.

Case One

A premature boy, second child in his family, weighed five pounds, four ounces (2.38 kg.) at birth, August 19, 1958. Jaundice, noticed shortly after birth, had increased by the second day and his weight had dropped to four pounds, fourteen ounces (2.36 kg.). The older brother was well and had no history of jaundice.

Serum bilirubin was 17 mg. percent (direct 1.5 and indirect 15.5) and hemoglobin, 17 gm. percent. Blood cell and differential counts were within normal limits except for a moderately low white cell count. Tests for abnormal antibodies in the mother's serum, an agglutination test, and an antiglobulin test all gave negative results. The baby's physical progress after a transfusion was satisfactory, and jaundice disappeared after three days.

Physical examination, October 10, revealed no abnormalities. The weight was eight pounds, two ounces (3.7 kg.), height, twenty inches (51 cm.), and hemoglobin, 9.4 gm. percent. A multivitamin preparation was prescribed, and iron complex equivalent to 7.5 mg. elemental iron three times daily, which, on October 18, was increased to 15 mgms. twice a day. By November 14, the iron level in the serum was 110ug. percent. On December 26, hemoglobin was 10.5 gm. percent; red cell count 3,620,000 (twenty percent target cells), and white cell and differential counts were within normal limits. The child was pale.

On Feb. 27, 1960, hemoglobin was 10.7 gm. percent, and red cell count 3,450,000. Other hematologic data were noncontributory. The child weighed twenty pounds, nine ounces (9.07 kg.) and was twenty-eight inches (71 cm.) tall. The skin was moderately pale, but his condition otherwise was good.

TABLE 4 HEMOGLOBIN RESPONSE OF OBSTETRIC PATIENTS TO IRON-CARBOHYDRATE COMPLEX

PATIENT	DAILY DOSE	INITIAL	FINAL	NET GAIN	DURATION OF THERAPY (WEEKS)
1.	1 tsp. (100 mg. iron)	9.0	10.8	1.8	16
2.	"	8.2	10.6	2.4	19
3.	"	10.4	12.5	2.1	16
4.	"	9.2	12.5	3.3	18
5.	"	8.0	9.8	1.8	5
6.	"	6.9	10.4	3.5	2
Average (6)		8.6	11.1	2.5	12.6
7.	2 tsp. (200 mg. iron)	8.8	10.2	1.4	20
8.	"	8.8	11.0	2.2	8
9.	"	9.6	11.5	1.9	14
10.	"	9.6	10.9	1.3	26
11.	"	9.8	11.6	1.8	19
12.	"	9.2	12.8	3.6	22
13.	"	9.4	11.6	2.2	6
14.	"	8.6	11.4	2.8	8
15.	"	9.3	11.2	1.9	9
16.	"	8.2	10.2	2.0	9
17.	"	8.6	11.8	3.2	3
18.	"	8.8	10.8	2.0	6
Average (12)		9.1	11.3	2.2	12.5

PATIENT	DAILY DOSE	INITIAL	FINAL	NET GAIN	DURATION OF THERAPY (WEEKS)
19.	3 tsp. (300 mg. iron)	10.2	13.0	2.8	21
20.	"	10.2	13.0	2.8	*
21.	"	11.0	12.6	1.6	25
22.	"	10.6	12.8	2.2	20
23.	"	9.1	12.4	3.3	12
24.	"	10.4	12.2	1.8	12
25.	"	10.8	12.0	1.2	11
26.	"	9.8	11.6	1.8	*
27.	"	9.8	12.0	2.2	12
28.	"	9.6	11.7	2.1	12
29.†	"	10.9	12.0	1.1	*
30.	"	9.8	12.0	2.2	*
31.	"	9.8	11.0	1.2	11
32.	"	10.9	13.0	2.1	12
33.	"	11.2	14.0	2.8	13
34.	"	10.6	12.0	1.4	26
35.	"	9.4	11.6	2.2	20
Average (17)		10.2	12.3	2.1	*

† Medication discontinued at six months because of toxemia of pregnancy.

* Exact data not available, but it is known that therapy was continued for more than 10 weeks.

TABLE 5 HEMOGLOBIN RESPONSE OF PRIVATE PEDIATRIC PATIENTS TO IRON-CARBOHYDRATE COMPLEX

PATIENT	DOSE T.I.D. AS MG. IRON	SEX	AGE	HEMOGLOBIN, GM. PER 100 ML.			DURATION OF THERAPY (WEEKS)
				INITIAL	FINAL	NET GAIN	
1.*	7.5	F	11 mos.	11.0	14.1	3.1	16
2.	7.5	M	8 yrs.	9.1	12.8	3.7	9
3.	7.5	F	2½ yrs.	10.9	13.6	2.7	4
Average				10.3	13.5	3.2	9.6
4.*	15	M	10½ yrs.	10.5	13.5	3.0	12
5.	15	F	7 yrs.	11.0	12.5	1.5	9
6.	15	F	4 yrs.	12.2	14.0	1.8	13
7.	15	F	8 mos.	12.0	13.2	1.2	9
8.	15	M	4½ yrs.	10.9	13.0	2.1	20
9.*	15	F	3 yrs.	12.5	13.2	0.7	27
10.*	15	M	4½ yrs.	12.0	14.6	2.6	17
11.*	15	M	2 yrs.	12.0	13.5	1.5	18
12.	15	M	8 mos.	10.5	11.7	1.2	9
13.	15	F	8 yrs.	11.5	12.5	1.0	14
14.*	15	F	2½ yrs.	11.0	13.5	2.5	10
15.	15	F	5½ yrs.	10.7	13.5	2.8	8
16.	15	M	8 mos.	10.5	12.8	2.3	6
17.	15	M	16 mos.	10.7	12.0	1.3	9
Average				11.3	13.1	1.8	13

* These experienced marked improvement in appetite and/or weight.

On June 4, he was very active, took all feedings, had regular bowel movements, and skin color had improved considerably. Hemoglobin was 12.6 gm. percent.

Case Two

A nine-year-old girl with intractable diarrhea was seen on January 4, 1960. She had had the usual childhood diseases and routine inoculations. She had suffered frequently from diarrhea and gastrointestinal upsets for a year. An infection of the upper respiratory tract was followed by loss of weight and as many as eight to ten loose, green, mucous stools daily during the two weeks before her visit. Bowel movements had been painful. Her temperature, which had been between 101 and 103 F. for five days, was normal at the time of examination. The child was pale, the scleras were bluish-white, and tonsils had crypts. Other physical findings were normal except for some tenderness over the abdomen. The rectum was moderately excoriated. She weighed fifty-six pounds (25.4 kg.) and was fifty-three inches (134.6 cm.) tall. Hemoglobin was 10.5 gm.

percent; red cell count, 3,100,000. The differential count was within normal limits. Urinalysis, stool cultures and examination for occult blood were negative.

A constipating diet, multivitamin preparation, and one teaspoonful daily of the iron complex (100 mgms. elemental iron) were prescribed. The patient's color, appetite and weight improved during three and one-half months of this treatment, and she was well except for occasional upper respiratory infections. Growth was satisfactory.

On April 30, she weighed sixty-two and one-half pounds (28.4 kg.) and was fifty-four inches (137 cm.) tall. Hemoglobin was 13.5 gm. percent; red cell count 4,800,000, and white cell count 4,200,000.

Case Three

A premature girl weighed four pounds, ten ounces (2.098 kg.) at birth, on June 26, 1958. On October 24, her appetite was poor and she was extremely restless. Her weight at this time was eight pounds, twelve ounces (3.97 kg.). She showed no abnormalities except a

hemoglobin level of 10.5 gm. percent. An increased caloric intake was advised and ferrous sulfate (12 mg. iron daily) was prescribed.

On November 28, her mother reported that the infant was taking more milk than she had been, but refused all other foods. The blood picture was unchanged.

On August 18, 1959, the mother reported that the child took less than one quart (0.95 liter) of milk daily, refused all solid foods except desserts, and was restless and slept poorly. She had been given a multivitamin preparation. The child weighed twenty-eight pounds (12.7 kg.) and was thirty-six and one-half inches (93 cm.) tall. She appeared anemic; other physical findings were essentially normal. Hemoglobin was 10.0 gm. percent; red cell count, 3,200,000. White cell and differential counts revealed no abnormalities. Feedings of egg yolk added to milk were advised. A multivitamin preparation and iron complex (15 mgms. iron twice a day) were prescribed.

On December 12, her color, appetite, and sleeping pattern were considerably improved. She weighed thirty-one pounds (14.06 kg.) and was thirty-seven inches (94 cm.) tall. Hemoglobin was 11.5 gm. percent.

On February 10, 1960, the infant appeared lively and was eating well. Hemoglobin was 12.5 gm. percent. The mother reported that she took the iron complex readily in fruit juice, and that there had been no gastrointestinal disturbances. Bowel movements were regular and normal, and she slept well.

On May 10, her weight was thirty-three pounds (14.97 kg.) and her height thirty-seven and one-half inches (95.25 cm.). Hemoglobin was 13.5 gm. percent. The mother had no complaints regarding the infant's progress.

● COMMENT. These case reports illustrate three of the many conditions that may be associated with a need for iron supplementation; neonatal hemolytic anemia, intractable diarrhea in children, and prematurity.

General Comment

Since it may take from six to ten months to correct iron-deficiency anemia, iron should be given early to infants, in the first month to premature infants and between the fourth and the sixth month to others. This recommendation parallels early administration of vitamin preparations, which one of us⁹ advocated in 1939 and later.

Children from four to ten also frequently have a low hemoglobin level. During the period of development and growth, therefore, as well as during recurrent infections, complete examination of the blood of children should be routine.

Iron supplementation is needed also during pregnancy. This is illustrated by the fact that before this study was undertaken, the low hemoglobin levels reported in our well baby clinic had prompted a check of the hemoglobin level and diet of expectant mothers. The self-chosen diets of women attending the prenatal clinic showed a daily iron intake of about 6 to 8 mgms. in most cases. This amount would meet ordinary requirements, but is only half the amount required to maintain body reserves during pregnancy.

Because iron-deficiency anemia may recur when iron is discontinued as soon as the hemoglobin level reaches normal, it is advisable to continue iron medication until iron in the tissues as well as hemoglobin iron has been replenished.

Summary

A new iron-carbohydrate complex of low toxicity (Jefron®) was evaluated clinically in the treatment of eighty-two patients, including infants, children and adults.

Satisfactory hemoglobin responses occurred in all groups.

Patients of all ages accepted the preparation readily, and there were virtually no side reactions.

This new iron complex appears to fulfil the requirements for a safe, palatable, effective and well tolerated iron preparation.

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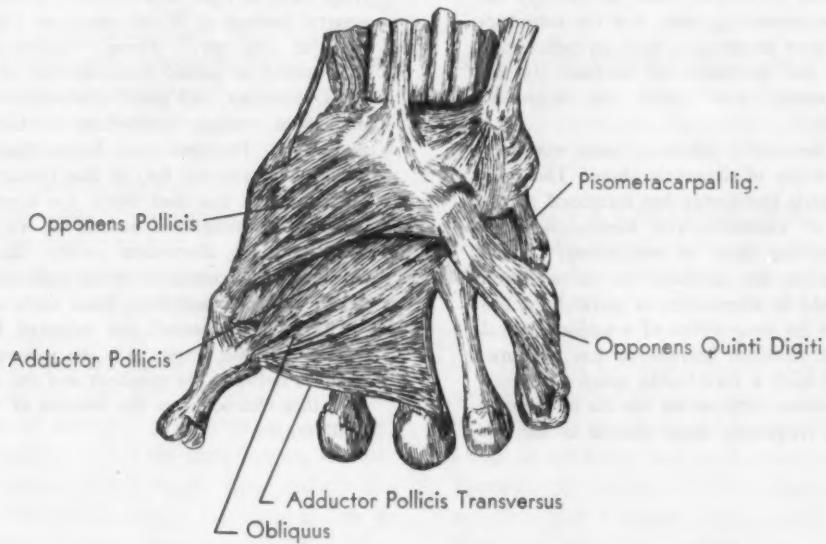
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CONFERENCES ON CARDIOVASCULAR THERAPY

The Cause and Treatment of

EDITOR: MYRON R. SCHOENFELD, M.A., M.D., Yonkers, New York

It has been said that medicine has advanced more in the past fifty years than in the preceding five thousand, and in few other fields has this been more apparent than in the area of cardiovascular diseases. Instrumentation—and in particular electro- and vector - cardiography, roentgenography, cardiac catheterization, and phonocardiography in all of their diverse modifications—has put diagnosis on a relatively objective and accurate basis. Refinements in instrumental technique, such as selective biplane angiography, and the introduction of new techniques, such as radioactive isotope and indicator-dye dilution studies, are opening new vistas in diagnostic accuracy.

Yet impressive advances have not been in the realm of diagnosis alone. The pace with which knowledge has increased in the sphere of cardiovascular therapeutics has been nothing short of astounding, and in some areas the advances in therapeutics, more than in diagnostics or physiology, has assumed the proportions of a major medical triumph. Indeed, knowledge has accumulated at such a formidable speed that even the interested student, no less the busy practitioner, frequently finds himself in the un-

comfortable position of being alternatively confronted with methods of testing which he cannot evaluate, barraged with conflicting claims of competing drugs, and confused by the proponents of divergent plans of therapy. There has been, then, a growing need for a systematic synthesis of contemporary knowledge in this field, and it is to the fulfillment of this need that the following series of papers is directed.

Starting with this issue, there will appear from time to time articles titled under the general caption of "Conferences on Cardiovascular Therapy." These "Conferences" will consist of edited transcriptions of lectures, seminars, and panel discussions conducted at various institutions in Greater New York. The conference format has been deliberately chosen; for, in this literary dimension, one can best blend the scholarly opinions of recognized authorities with the fluidity of a discussion group, thereby achieving the combination of authenticity, flexibility, and readability. Thus while many of "The Conferences" are initiated by a lecture of some length, it is the subsequent repartee between the speakers and the audience that characterizes the essence of "The Conferences."

Presented at the Hospital for Joint Diseases, New York, New York.

Intractable Congestive Heart Failure

DR. KWIT (MODERATOR): The subject of this afternoon's conference is the causes and treatment of intractable heart failure and of acquired tolerance to diuretics. The speaker is Dr. Dilip Mehta. As you all know, he is on leave from the University of Bombay, in India, and is presently working with Dr. Harry Gold in the field of human pharmacology at the Cornell Medical College. Dr. Mehta.

DR. MEHTA: Thank you, Dr. Kwit. All of us have had occasion to see patients who have congestive heart failure and who, though initially responding to the conventional methods of treatment — digitalis, salt restriction, and diuretics — eventually became refractory to these measures. Such cases are variously termed intractable edema, resistant edema, or intractable congestive heart failure. What usually happens in such cases is that the physician shifts from one drug to another and still another in an attempt to find a regimen which will be effective. However, such a recourse is usually not necessary. All that may be needed is an alteration in the conventional methods of therapy, a revision of diagnosis, or recognition of certain complicating factors.

The causes of intractable heart failure are many. Textbooks usually list such causes as pulmonary embolism, bronchopneumonia, myocardial infarction, overdigitalization, ammonium chloride acidosis, internal bleeding due to anticoagulants, various electrolyte disturbances (of-

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ten caused by too much or too little treatment with diuretics and salt restriction), and so forth. However, all of us know how rare it is to see a case of refractory failure due to these causes. There are several other factors more commonly involved, and I would like to review some of them with you now.

Of great importance in the control of congestive heart failure is the limitation of the patient's sodium intake. Unfortunately, it is a

common belief that almost any amount of sodium can be given to a patient provided he is treated vigorously enough with diuretics. This is not true. As far back as 1945, Dr. Gold, Dr. Kwit and others showed that one cannot properly treat severe congestive failure without adequate salt restriction. May I have the first slide please?

(Slide 1.) This is one of Dr. Kwit's slides. The patient was on a low-salt, high-carbohydrate hospital diet and received 1 cc. doses of Mercuhydrin® off and on. While at the beginning he lost some weight, as you can see, he soon began retaining water in excess of what he was losing. At this point, the dose of Mercuhydrin was increased to 2 cc. daily and the diet was changed to milk and water, thereby providing a liberal amount of fluid but restricting the sodium intake. The patient then had a satisfactory diuresis.

DR. KWIT: May I comment on this slide?

DR. MEHTA: Certainly.

DR. KWIT: I remember this case. This patient was a young man of thirty-seven years. At the beginning he responded well to injections of Mercuhydrin. Then he began to gain weight for no apparent reason. I began thumbing through the hospital chart and discovered an important fact. One evening the patient complained of epigastric burning. The Resident doctor covering the ward that night ordered Sippy tablets, apparently unaware that the patient was in heart failure. The patient consumed fifty grams of sodium bicarbonate in the form of Sippy tablets, and this accounted for his weight gain.

DR. MEHTA: Thank you, Dr. Kwit. Situations similar to the one you just described happen more often than is generally realized. We frequently find patients on a normal diet, which may contain ten to fifteen grams of sodium chloride or more, failing to respond to Mercuhydrin. The doctor then increases the dose of Mercuhydrin, starting with 2 cc. and going up to 4 to 6 cc., and still the patient does not respond. The case is then labelled "intractable," when, in fact, all that is needed is adequate salt restriction. I would say that this

is the most common cause of "intractable edema." However, there are other causes too. Could we have the next slide please?

(Slide 2.) Here we see a patient who received seven injections of Mercuhydrin off and on in about five weeks time. As you can see, a pattern developed such that, during the first twenty-four hours after receiving Mercuhydrin, he would lose weight, and, during the second twenty-four hours, he would gain weight. Sometimes the weight gain would be equal to and sometimes even greater than the initial weight loss, with the result that, in the five weeks time, the overall weight change only amounted to a loss of two pounds. This slide teaches us that if we use Mercuhydrin every other day or once every three to four days, we may not achieve good results.

These studies were based on the sequential twenty-four-hour weight changes after single injections of Mercuhydrin. But it may be—and there is some evidence that this is so—that instead of a twenty-four-hour cycle, the effect of Mercuhydrin lasts only ten to twelve hours. In this case, the patient would lose weight in the first ten to twelve hours, and gain weight in the next twelve hours or so. The twenty-four-hour result would then show either no appreciable weight loss or a net weight gain. Such a phenomenon would explain why certain patients with congestive heart failure actually gain weight following an injection of Mercuhydrin (as judged by the weight change the following day), a result just the opposite of that expected.

The evidence to date suggests that diuresis, even in a patient with excess body salt and water, acts a stress, evoking a powerful counteracting antidiuretic response. Thus diuresis and antidiuresis go hand-in-hand with every injection of Mercuhydrin, or, for that matter, with the administration of any diuretic drug. Ordinarily, the diuretic response predominates during the initial twelve to twenty-four hours and the antidiuretic during the subsequent twelve to twenty-four hours. Often, within forty-eight to seventy-two hours, the antidiuretic phase overcompensates the diuretic phase, and the weight

record on the third day may actually register a net weight gain. At any rate, the final result depends on the magnitude and duration of the diuretic and antidiuretic components. And mind you, this phenomenon occurs even in the presence of adequate salt restriction. Let me illustrate this diuretic-anti-diuretic interaction with a few other examples. The next slide please.

(Slide 3.) This was another very edematous patient. During the early part of his hospitalization he received a 2 cc. Mercuhydrin injection every three or four days, and the twenty-four hour weight gains and losses were plotted. After the first injection, he lost nine pounds during the first twenty-four hours but gained back two pounds in the second twenty-four hours. With the second injection, he lost six pounds in the first twenty-four hours and gained back six pounds in the second twenty-four hours . . . and so on with each injection. If we add up all the weight losses incurred in the first twenty-four hours after each injection, the effect of Mercuhydrin seems very impressive indeed, for the total weight loss amounts to almost thirty pounds. However, because the kickback during the second twenty-four hours after each injection largely negated these weight losses, the overall weight loss amounted to only six or seven pounds. This case then, might be called "intractable." Actually, however, the patient was not intractable at all, not even to Mercuhydrin, for when 2 cc. of Mercuhydrin was administered daily, he lost weight promptly and consistently, and in only a few days he was edema-free. I would like to re-emphasize, then, that, if we are to expect good results with Mercuhydrin, we should administer it at least once daily. Next slide please.

(Slide 4.) Here again we see the same phenomenon, a loss of weight during the first twenty-four hours after Mercuhydrin and a gain in weight during the second twenty-four hours. Note, however, that after the first few injections, Mercuhydrin began to cause a weight gain, even during the first twenty-four-hour period. Apparently the first few injections of Mercuhydrin stimulated the body in some way

so the effect of Mercuhydrin given later on was reduced, and, in fact, reversed.

It thus appears that diuresis and antidiuresis are part and parcel of every response to diuretic drugs, including Mercuhydrin and the chlorothiazide derivatives. Dr. Gold had some hunches about the cause of the antidiuresis. He reasoned that there were only a few factors likely to cause this type of reaction, namely, excess secretion of the posterior pituitary antidiuretic hormone, excess secretion of an adrenal steroid, or activation of osmoreceptors. Dr. Gold focused his attention on the steroids. It was argued that if the stress of diuresis called forth the secretion of a salt and water-retaining hormone from the adrenal cortex, perhaps the effect of this hormone could be impeded by the administration of other steroids. The next slide please.

(Slide 5.) This patient was given 2 cc. of Mercuhydrin every other day. Here again we see the patient losing weight in each twenty-four-hour period immediately following a Mercuhydrin injection and gaining back some weight in each succeeding twenty-four-hour period. Then a steroid was given—and I might add that it doesn't matter which steroid is used, for cortisone, hydrocortisone, prednisolone, methylprednisolone, prednisone, various spiro-lactones, androgens, estrogens, progesterone, and many other steroids appear to work equally well. After the steroid was given, the weight loss in the first twenty-four hours after an injection of Mercuhydrin was increased. In the second twenty-four hours, not only didn't we see a rebound weight gain, but a weight loss was actually recorded. The effect of Mercuhydrin was thus enhanced. Now the steroids by themselves either have no effect on salt and water turnover or cause salt and water retention. The enhancement of the effect of Mercuhydrin by the steroids thus cannot be attributed to the combined effects of two diuretics. Rather, it would seem that diuresis calls forth a defense mechanism of the body involving the hypersecretion of a mineralocorticoid—perhaps aldosterone—and that the administration of exogenous steroids suppresses the effect of this

mineralocorticoid, thereby permitting the full effect of Mercuhydrin to be seen. We can further conjecture that since the steroids (including the spiro lactones) molecularly resemble the endogenous mineralocorticoid, they compete with it at the target organ: the renal tubule. Since the mineralocorticoid is probably secreted in minute doses, measured in micrograms or tenths of micrograms, and the exogenously administered steroids are given in the comparatively overwhelming doses of milligrams, the mass action law applies and the exogenous steroids competitively inhibit the action of the mineralocorticoid at the target organ. This, to my mind, is the only plausible explanation for the action of the steroids in the cases described above. Can I have the next slide?

(Slide 6.) This slide also illustrates the efficacy of steroids in these cases. While it may be that the antidiuresis which accompanies a diuretic response is due to a number of factors, in most cases the antidiuresis can be largely or entirely abolished by the administration of steroids. This suggests that the anti-diuretic phase is largely due to the excessive liberation of aldosterone or an aldosterone-like hormone. And now the last slide please.

(Slide 7.) Here we see that the patient lost successively less weight with each of three injections of Mercuhydrin, but after a single dose of steroid, an injection of Mercuhydrin caused three times the loss of weight than did the preceding injection of Mercuhydrin.

DR. KWIT: Thank you very much, Dr. Mehta, for this most interesting discussion. Are there any questions?

DR. SCHOENFELD: Does the rebound antidiuresis you describe occur in digitalized patients?

DR. MEHTA: Yes. If we thought the patient required digitalis, we gave it to him. But why do you ask?

DR. SCHOENFELD: The reason I asked this question is that digitalis is a steroid, and therefore it might also be expected to block the action of the endogenous electrocorticoids. It is interesting that digitalis doesn't seem to work in this way.

DR. MEHTA: I wouldn't be surprised if digitalis did augment the effect of Mercuhydrin in this way, at least to a certain extent. Dr. Gold and I had discussed the possibility of testing one of the digitalis preparations which lacked a cardiac effect to see if it would enhance the effect of Mercuhydrin, but we haven't had a chance to try out this idea yet. However, it seems to me that the phenomenon is one of mass action: we must flood the renal tubules with exogenous steroid to block the action of the endogenous mineralocorticoids. Since digitalis is ordinarily administered in small amounts because of the sensitivity of the heart and vomiting center to the drug, we cannot expect it to be a potent competitive inhibitor of the electrocorticoids.

DR. KWIT: I would like to re-emphasize what Dr. Mehta brought out so clearly, that amongst the commonest causes of so-called "intractable edema" are too much sodium and too little water intake. Many physicians still limit the fluid intake. However, if the patient does not have an adequate fluid intake, it is going to be difficult to rid him of his edema.

VISITOR: How much sodium should these patients be allowed in their diet?

DR. KWIT: What we generally do is give them one or one and one-half quarts of milk and one or one and one-half quarts of water a day. This limits their sodium intake. As time goes on, and as we want to liberalize their diet, we gradually add a bowl of rice with some sugar, a couple of eggs, a few slices of salt-free bread, and salt-free butter. The patient is then placed on a sodium diet of 0.5, 1.0, and 1.5 grams.

But let me add that sometimes even severe salt restriction will not suffice, and that vigorous drug treatment may be necessary. Just a few months ago, I saw a man of sixty-five years who had severe heart failure, ascites, and a huge, fluid-filled scrotum. He had been treated unsuccessfully with the usual therapeutic regimen — salt restriction, digitalis, diuretics, and so forth. He was in a serious condition. I began by giving him 2 cc. of Mercuhydrin daily, and nothing happened. I flooded him

with fluid, and still nothing happened. I then began giving him 2 cc. of Mercuhydrin in the morning and 2 cc. at night and he lost fifty pounds in about three weeks. The patient, then, did not have intractable edema; he simply needed more Mercuhydrin.

VISITOR: Is there any danger of kidney damage from too much Mercuhydrin?

DR. KWIT: If the patient has a good urinary output, I don't think you will get into difficulty.

VISITOR: Dr. Kwit, how large a dose of Mercuhydrin have you given in a day?

DR. KWIT: We have given as much as 8 cc. a day.

VISITOR: Is there much difference between the effects of 4 cc. and 8 cc. of Mercuhydrin?

DR. KWIT: Ordinarily 2 cc. of Mercuhydrin is the ceiling dose. However, in occasional instances, the patient will respond better with 4 cc. than with 2, and with 8 cc., than with 4.

VISITOR: I have had an unusual experience with Aldactone® which I would like to relate. During the patient's first course of Aldactone and Mercuhydrin, she lost sixteen pounds in one week. In the second and third courses, the weight loss progressively decreased. Recently, after the lapse of some months, she had a fourth trial, and her responsiveness returned. Is resistance built up to the spiro lactones?

DR. KWIT: I don't know. Do you have any information on this subject, Dr. Golfinos?

DR. GOLFINOS: To the best of my knowledge, the development of resistance and tachyphylaxis does not occur with any of the steroid compounds. A few doubtful cases of allergic reactions to steroids have been reported, but that is all. ACTH, of course, can cause allergic reactions, and even anaphylaxis.

DR. KWIT: Are there any other comments or questions?

DR. GOLFINOS: I would like to comment on Dr. Schoenfeld's suggestion that digitalis may behave like the other steroids in enhancing the effect of Mercuhydrin. Dr. Pitts and his group at Cornell injected digitalis directly into the renal artery of dogs and showed that the drug exerted a tremendous diuretic action directly on the kidney.

DR. SCHOENFELD: Yes. Dr. Kupfer, at the Mt. Sinai Hospital, has performed similar experiments, and, in the one I witnessed, the results were truly impressive.

DR. MEHTA: The doses used in these experiments, however, were huge, and if given by mouth to humans would undoubtedly prove lethal. This, then, is a pharmacologic and not a therapeutic effect of digitalis.

DR. GOLFINOS: I agree. In therapeutic doses, the action of digitalis is confined to the heart. By improving the state of cardiac compensation it promotes renal blood flow, and in this way causes diuresis.

DR. KWIT: Have you anything to add, Dr. Schoenfeld?

DR. SCHOENFELD: I was very interested to hear Dr. Mehta's statement that ammonium chloride acidosis was a cause of intractable heart failure. I presume he was referring to severe intoxication, for both mild acidosis and an adequate chloruresis tend to enhance the action of mercurials. It used to be the teaching that Mercuhydrin was never given without prior ammonium chloride priming. Gradually, however, this therapeutic axiom fell into disfavor because of the problems created by ammonium chloride administration. If given in nascent form, ammonium chloride causes severe vomiting and is quite intolerable. Enteric-coated pills are more acceptable, but nausea and vomiting are still a problem, and frequently the pills fail to be absorbed, but rather are passed out intact in the stool. Moreover, the patients who need the drug the most—those in severe congestive heart failure—are the very ones with large congested livers and decreased hepatic detoxifying capacity, and in some of these patients the administration of ammonium chloride creates the hazard of precipitating ammonia toxicity. The intravenous injection of ammonium chloride is even more treacherous. Both calcium chloride and potassium chloride are also irritating to the gut, and, in addition, present unique problems of their own. The use of chloruretic acidifying adjuvants for mercurial diuresis thus fell into disrepute. However, in the past two years or

so, there has been a reawakening of interest in these agents. Both lysine and arginine hydrochloride have been tried, orally and parenterally, and the results have usually been quite gratifying. The lysine and arginine moieties themselves are largely inert as far as diuresis is concerned; they serve mainly as vehicles for carrying the hydrochloride radical. These substances are well absorbed from the intestine, and produce little if any gastrointestinal intolerance. Apparently, lysine participates only slowly in the ammonia pool and arginine may even aid in ammonia detoxication. The danger of ammonia toxicity, then, would seem to be substantially less than with ammonium chloride. At any rate, these drugs tend to produce a slight acidosis, and a potent chloruresis. Urinary chlorides may rise from almost zero to above sixty and often above one hundred milliequivalents per liter in just two or three days, and many of the patients thereupon lose their "refractoriness" to mercurials. I recall one patient in particular who had a most impressive response with lysine hydrochloride. She was a longstanding rheumatic with multivalvular disease, and, despite all of the conventional measures of treatment, she was sinking into progressive congestive heart failure even at bed rest. When lysine hydrochloride was added to the regimen, she became ambulatory and maintained a fixed weight over a period of many months.

DR. GOLFINOS: Yes, both acidosis and chloruresis are generally beneficial in achieving a good diuresis with mercurials. However, if one uses a diuretic like Diamox® which itself causes hyperchloremia and acidosis, ammonium chloride is not needed, and, in fact, may prove poisonous.

DR. MEHTA: I would like to ask Dr. Schoenfeld what he thinks of the role of osmoreceptors in the antidiuretic kickback following a mercurial diuresis.

DR. SCHOENFELD: While it is only a guess, I don't feel that osmoreceptors are involved. As you know, there is a tendency in congestive heart failure to have water retention over and above sodium retention—a tendency toward a

dilutional hyponatremia. Mercuhydriin, in contrast to chlorothiazide, causes a free water loss over and above the sodium excreted. Therefore, Mercuhydriin tends to restore the normal sodium concentrations in the extracellular fluid and would not tend to activate an osmoreceptor system. If anything, a volume receptor system would be involved. It appears to me that the antidiuretic rebound following a diuresis resembles that following a hemorrhage or a burn, and I would presume a similar mechanism is involved in each of these cases.

DR. MEHTA: Our experiences with the spiro lactones, when used alone without diuretics, were generally unsatisfactory. Has anyone had any other experience with these drugs?

DR. SCHOENFELD: I have had a limited experience with Aldactone. We attempted some studies with this drug concurrently with our lysine experiments. However, our initial trials gave such unsatisfactory results that the Resident staff soon lost heart and refused to allow testing of the drug on other patients. Therefore, we were unable to collect enough data to make any definite statements.

DR. MEHTA: I would like to comment on this factor of Resident acceptance. In an experiment in Bombay, we wanted to compare two medications—one containing a standard drug and the other a new test drug. We too had to obtain the cooperation of the resident physicians on the ward. I outlined my plan to them and obtained their consent. Without their knowledge, however, I made one minor change in the protocol—I interchanged the standard and the test drug—and they threw the standard drug away!

DR. KWIT: Thank you, gentlemen. Unfortunately, our time has run out and the conference will have to be brought to an end. I want to thank you all for your contributions to today's discussion.

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ANORECTAL PAIN

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More people consult physicians because of pain than because of any other stimulus. There are various kinds of pain caused by different types of perianal, anal, and rectal lesions. Physical pains are of two distinct types: cutaneous or superficial, and visceral or deep. The former seems to exert an exhilarating effect, inciting the subject to fight or flee; it usually can be localized fairly well. The latter is of a dull aching quality, induces depression and inactivity, and is generally poorly localized.

Interpretation of pain on the part of the patient is dependent on three things: 1) the degree of stimulus causing it, 2) the type of tissue which receives the stimulus, and 3) the patient's threshold for the perception of pain. Tissues such as cornea, skin, etc., are of ectodermal origin and contain a large supply of pain-registering nerve endings. Muscles, tendons, and ligaments are of mesodermal origin and have pain-registering nerve endings which are greatly influenced by ischemia. The tissues of the gastrointestinal tract, kidneys, gall bladder, etc., are of endodermal origin and have nerve endings which most likely transmit pain through the sympathetic nervous system. This may involve the mechanism of referred pain.

Two components comprise the sensation of pain. These are perception of pain and reaction to pain. Perception of pain is a purely physiologic mechanism and depends on the

intactness of nerve connections and conduction pathways. On the other hand, reaction to pain is basically psychogenic, is highly individual, and is modified by complex functions. The threshold for perception of pain is remarkably constant and similar in healthy human beings. In contrast, reaction to pain varies between wide limits in different people and may vary considerably in the same person. Even though their thresholds for the perception of pain may be the same, the tense, sensitive person experiences more pain than the placid individual.

Anorectal pain may be classified under either perianal and anal conditions or rectal conditions. Rectal mucosa is not sensitive to pain; perianal and anal skin are sensitive.

The passage of feces rarely affects the pain caused by lesions in the skin of the perianal zone independent of the anus. Pain in the anus is affected by defecation. Lesions extending into the anus usually cause spasm of the sphincter muscles, which may initiate or increase the pain.

Diarrhea, the frequent use of ointment, and the ingestion of antibiotics, causing mild inflammation of the perianal skin, will also cause a burning discomfort frequently with itching.

Occasionally, secondary lesions of syphilis, chancroid gonorrheal infections, and certain

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diseases of the nervous system, such as multiple sclerosis and spinal cord tumor, will cause "soreness" or "burning" of the anorectal region. Cryptitis has been overrated as a cause of this symptom.

An anal fissure causes pain that is lancinating, cutting, or intermittent, starts or increases during defecation, and continues for a few minutes to an hour. Tears and abrasions of the perianal skin may cause less severe, sharp, cutting pain. Anal ulcerations associated with regional enteritis, anorectal cancer, or chronic ulcerative colitis may bring about an intermittent, lancinating pain which increases during defecation. If a thorough history is elicited and a complete physical examination, including sigmoidoscopy, is performed, these conditions will not often be confused with an anal fissure.

An ischioanal abscess with a fistula in ano produces a constant throbbing or aching pain. A pilonidal abscess that points in the perianal region or a large furuncle should be considered when making a diagnosis. The pain created by an abscess varies with its depth and the pressure in the overlying skin. The character of the pain is influenced by the age and size of the abscess and by its proximity to the sphincter muscles and skin.

Hypertrophied anal papillae, internal hemorrhoids, and polypoid lesions which protrude through the anus only during defecation may produce little or no pain. However, if they remain prolapsed, a constant, severe throbbing or aching pain increased by defecation may result, accompanied by edema, erosion, gangrene, or thrombosis. The sudden dull, aching pain of a thrombosed external hemorrhoid is easily recognized. The size of the thrombosed external hemorrhoid is easily recognized. The size of the thrombosis, the amount of pressure in the overlying skin, and the proximity of the hemorrhoid to the sphincter muscles influence the intensity of this pain. Uncomplicated internal or external hemorrhoids create little discomfort, and the physician should be slow to attribute pain in the anorectal area to hemorrhoids alone.

Unless lesions of the rectum involve the

anus and are sufficiently extensive to cause pressure or produce spasm of the anorectal musculature, they do not cause pain. Cancer of the rectum may be too far advanced for successful treatment before it causes pain. One should not rely on pain to make a diagnosis of cancer.

Inflammation of the rectal mucosa, as seen in proctitis associated with chronic ulcerative colitis, bacillary dysentery, amebiasis, or tuberculosis, may cause spasm of the rectal musculature or tenesmus. The tenesmus may vary from a mild to an intense and constant desire to evacuate the rectum due to spasm of the circular muscles of the lower bowel. Frequency or looseness of stools also aid in the diagnosis of these conditions. In the same manner, foreign bodies in the rectum, impacted feces, and rectal neoplasm, particularly if extensive, may cause painful spasm of the intrinsic musculature of the rectum and tenesmus. Spasm of the intrinsic musculature of the rectum, causing a painful, ineffectual effort to evacuate the rectum, may occur when the mucosa is sufficiently inflamed in lymphopathia venereum or benign rectal stricture. Occasionally, diverticulitis produces a painful rectal spasm. Painful spasm and tenesmus, so intense as to cause severe prostration and lasting from one to fifteen minutes, may be created by extrarectal malignant lesions that have extensively invaded the rectal wall. In Proctalgia Fugax, there are various opinions as to whether the site of spasm is in the rectosigmoid, internal sphincter, or rectum. One opinion is that it is an intussusception of the sigmoid through the rectosigmoid junction into the rectum. Most often, the condition is found in tension states and it seems to have a trigger mechanism.

Severe and most persistent rectal pain which is difficult for the patient to locate is occasionally produced by tabes dorsalis and tumors of the spinal cord. Neurologic findings and complement fixation tests will aid in the differential diagnosis.

A vague or a severe pain, unable to be located accurately by the patient, may be caused by conditions which produce an increase

in size of the prostate gland or the seminal vesicles, perirectal abscesses, presacral tumors, endometriosis, benign and malignant tumors in the perirectal spaces, or inflammatory or malignant processes in the pelvis. The person may feel as if this pain were in the rectum. He may be able to locate a sensation of burning or pressure or an aching discomfort high in the rectum. The examiner must be alert for extrarectal conditions which may cause these symptoms.

The "Thiele syndrome" is characterized by tenderness and pain in the adjacent muscles and soft tissues of the posterior rectal region, or in the area of the lower portion of the sacrum and coccyx. The pain is most likely produced by a tonic spasm of the levator ani and coccygeus muscles. Pain in the hip and leg may be due to pressure on the sciatic nerve if the piriformis muscle is involved. This condition frequently occurs after prolonged sitting or riding in an automobile and is not accentuated by defecation. This occurs more commonly in women than in men. A thorough search should be made for foci of infection: in men, in the posterior urethra, prostate gland, rectum, anus, and seminal vesicles; and in women, in the urethra, rectum, anus, bladder, and vagina.

The excessive use of enemas (especially with soapsuds or hydrogen peroxide), injection treatment of hemorrhoids, application of radium to the cervix with subsequent radiation proctitis, incomplete evacuation of fecal impactions, and scars resulting from rectal surgery are other possible causes of the complaints of discomfort, vague pain, or a feeling of pressure in the rectum.

The diagnosis of neurosis should be considered only after all other possible causes of

rectal pain have been rejected by complete examinations.

Many persons modestly hesitate to express complaints concerning the rectum, and the doctor sometimes fails to ask questions about this area. Careful questioning at times leads to the discovery of a condition more serious than the one which brought the patient to the doctor. The character of the pain, its precise location, manner of onset, length of time present, relationship to defecation, and whether or not it causes insomnia or awakens the patient from sleep should be learned. Also, the patient's threshold of pain and reaction to pain may be estimated.

Every physical examination should include a rectal examination. A complete examination of the lower bowel is best. This should include an inspection of the perianal skin, perineum, buttocks and back, digital examination with palpation between the thumb and finger of all structures adjacent to the anal canal and rectum, and sigmoidoscopic (not just an anoscopic) examination. In many cases, a barium enema with an air-contrast study is required. A physician should seek the opinions of other specialists, and should not hesitate to repeat the rectal examination before diagnosing "neurosis." It is quite possible to miss a small abscess which is causing rectal pain on the first examination. The administration of an anesthetic before examination may be necessary if the anus is extremely tender, spastic, or contracted or if the patient is of a highly sensitive nature. The importance of early diagnosis and treatment of cancer of the rectum or adjacent structures demands a thorough rectal examination in all cases.

1221 South Broadway



Buccal Use of Alpha Amylase

The clinical experience with the buccal use of alpha amylase in the treatment of inflammation and edema is reported. Alpha amylase is an effective antiinflammatory drug. The efficacy of alpha amylase used in this manner indicates that current concepts of the regression of inflammation are not complete.

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Inflammation is thought to be characterized by the polymerization of molecules of protein and their deposition in the tissues with ensuing impairment of the blood supply, venous drainage, and lymphatic drainage of the involved area. Fibrin is the macromolecular protein usually considered to be the chief offender in producing the obstruction although other proteins may participate in this process. It was logical, therefore, that proteolytic enzymes should come into use in the treatment of inflammatory states.¹⁻³ The success of these enzymes in the treatment of inflammation bolstered the assumption that proteins were the culpable agents.

The idea that this explanation of the resolution of inflammation was not complete was indicated by the clinical results following the

use of oxyphenbutazone,¹ Contergan-268,² and chlorbenzoxamine³ which did not cause proteolysis. It followed that drugs need not necessarily be proteolytic to be useful antiinflammatory agents. Alpha amylase was investigated on the basis that some abnormality of the metabolism of carbohydrates might be a part of inflammation.

Amylases are enzymes which hydrolyze the 1-4 glucosidic bonds of polysaccharides.¹¹ Alpha amylase attacks these bonds of the polysaccharides in a random manner while beta amylase is limited to hydrolysis of the penultimate bond remote from the hemiacetal end of the polysaccharide chain.

The medical literature is replete with references to the use of amylases as digestants but the use of alpha amylase as an antiinflammatory agent is a new idea. An explanation for this antiinflammatory action is not known. An

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animal study, however, suggested intriguing possibilities.⁹ In rabbits, trypan blue given intravenously promptly stained the area of injury. The time required for the appearance of the stain at the site was used as an index of permeability of the capillaries. Rabbits to which alpha amylase was administered buccally showed a prolonged time of staining which was interpreted to indicate a decrease in permeability of the capillaries. Since an increase in permeability of the capillaries is associated with inflammation, control of this factor by alpha amylase may be significant in antiinflammatory treatment.

Alpha amylase was provided in buccal tablets containing 10 mgms., or 20 mgms. of the enzyme. The tablets were placed under the tongue of the patient and permitted to dissolve. The patients were cautioned not to swallow, or expectorate, during the period the enzyme was in the mouth. The tablets usually dissolved within five minutes.

Twenty-three patients with inflammation and/or edema were given a dose of 10 mgms. of alpha amylase* buccally every twelve hours for three days, or longer, if their clinical condition demanded it (Table 1). In addition, two patients who were given the drug prophylactically to prevent the edema associated with some operations had an excellent result because edema was not seen.

In this group of twenty-three patients, the results were only fair because only nine of the patients were classified as having "excellent" or "good" results. It was apparent that, if alpha amylase had any virtue in the treatment of inflammation or edema, the dose must be increased to obtain a beneficial result. The series served as a convenient baseline, however, again which to compare experience at a large dose.

Twenty-one patients with inflammation and/or edema were given 20 mgms. of alpha amylase buccally every twelve hours for three days,

* The alpha amylase was supplied by the Rystan Company, Mount Vernon, New York and the Breon Laboratories, Incorporated, New York City, New York.

TABLE 1 RESULTS OF TREATMENT WITH ALPHA AMYLASE (10 MGMS.)

Condition Treated	No. of Patients	Excellent	Good	Fair	Poor
CELLULITIS	18	6	2	2	8
EDEMA	1	1	0	0	0
THROMBOPHLEBITIS	4	0	0	4	0
TOTALS	23	7	2	6	8

TABLE 2 RESULTS OF TREATMENT WITH ALPHA AMYLASE (20 MGMS.)

Condition Treated	No. of Patients	Excellent	Good	Fair	Poor
CELLULITIS	13	7	5	0	1
EDEMA	1	1	0	0	0
THROMBOPHLEBITIS	7	5	2	0	0
TOTALS	21	13	7	0	1

or longer, if their clinical condition demanded it (Table 2). In addition, one patient who was given the drug prophylactically to prevent the edema usually associated with an operation had an excellent result because edema was not seen.

In this group of twenty-one patients, the results were markedly superior since, apparently, enough drug had been given to achieve the desired results. Control of the inflammation was classified as "excellent" or "good" in twenty of the twenty-one patients.

Irritation of the buccal mucosa was not seen in any of the forty-seven patients to whom alpha amylase was administered. Other side effects were not found.

Comment

In the past years, it has been possible to assay clinically a number of antiinflammatory agents.¹⁻⁸ The same procedures and the same criteria for therapeutic efficacy were used in this series.

In the present instance, an opportunity to provide a control existed which had not been present previously. The dose chosen for the first series was at such a level that therapeutic effects were not discernible by the criteria which had been established by long usage. An

increased dose in the second series produced definite therapeutic effects by the same criteria. Since in each series a medication was given from which therapeutic results might be obtained, bias did not exist. This lack of bias maintained the same attitude in the patients. In this sense, this method had the virtues of a double-blind study which the use of a placebo is felt to provide.

It is worth considering whether this method is a good alternative to the double-blind procedure in which considerable credence has been

established at the present time. The method of analysis used has the demonstrated virtue of avoiding a premature judgment of inefficacy in patients in whom the dose is too small. It does not eliminate, of course, the necessity of having valid criteria of efficacy or a statistically significant number of patients for analysis. In the present situation, the validity of the criteria employed are credited by long usage. The use of this method of investigation is perhaps less likely to miss therapeutic efficacy than the employment of the double-blind procedure.

Conclusion

*The alpha amylase used in this preparation is produced by a bacterium which is not pathogenic and is in the class of the *Bacillus subtilis*.¹⁰ The enzyme closely resembles the amylase which is the principal enzyme of human saliva. Optimal activity is obtained from both enzymes at about the same pH and temperature.*

Buccal alpha amylase differs from buccal proteolytic agents in that it apparently is free of local irritating effects. Although therapeutic results with alpha amylase and the proteases appear to be the same, it is difficult to believe

that the methods by which these results are obtained can be similar. Certainly, alpha amylase does not accomplish the lysis of fibrin which is the common explanation for the prevention of edema by the proteases. The effect of alpha amylase upon capillary permeability in the inflammatory state seems the best lead, uncovered to date, for understanding its action. The blandness of this enzyme and the clarity of the clinical impression of its efficacy, in any event, make it an interesting and practical addition to the growing group of antiinflammatory agents.

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Veterans Administration Hospital,
Fort Howard Division

MEDICAL CONFERENCE

GLOMERULONEPHRITIS

Patient : A. G. (Male) Age 13
Presented by : Dr. Glotzer
Discussed by : Dr. Stifelman

DR. LONG: This morning, we will start with A. G., a 13-year-old Puerto Rican boy from Ward A-52, whose case record will be presented by Dr. Stifelman:

DR. STIFELMAN: Two weeks prior to admission, the patient had a sore throat and cough. He was not seen by a physician at that time and did not receive any antibiotics. Within a few days, the sore throat and cough subsided. Three days prior to admission, the patient noted a tightness in his chest, and a dull aching pain in the lower part of his back. The next day, each time he urinated, he noted that his urine had a reddish color. One day prior to admission, his face began to swell, especially about the eyes. He was seen by a private physician on the day of admission, who immediately sent him to the hospital.

His past history, is unremarkable except for measles at an early age and an ear infection six months prior to admission. His family history—his father has tuberculosis, but does not live at home with the family.

On physical examination, this boy's blood pressure was 150/90, his pulse 104, respirations 24 and his temperature was 101.4. He

had puffiness of the face, especially about the eyes. His fundi showed no hemorrhages, exudates or papilledema and his vessels were of good calibre. His neck was supple and he had no venous distention. He had inspiratory and expiratory rhonchi over both lower lung fields posteriorly which cleared with deep cough. His heart had a regular sinus rhythm, was not clinically enlarged, and a grade I to II systolic murmur was noted at the apex and in the pulmonic region. His P2 was rather loud and much greater than A2. His abdomen was soft. He had mild bilateral CVA tenderness and no peripheral edema.

On admission, his laboratory workup showed a hemoglobin of 10, a white count that was elevated, his sedimentation rate was 19 corrected. He has a normal differential white blood cell count. His urine was yellow and clear. It had a 3 plus albumin with about three white cells and five red cells with an occasional hyaline cast per HPF.

His course in the hospital—During the first twenty-four hours in the hospital, the patient's systolic pressure ranged from 144 to 174 and his diastolic from 90 to 110. By eight hours after admission, he had only put out 150 cc. of urine. For this reason, he was given a slow intravenous drip of 1000 cc. 5% glucose in water. Approximately twenty-four hours after admission, his blood pressure was 165/110.

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He was very lethargic and tachypneic and had a persistent tachycardia. He was immediately given 0.3 mgm. of Serpasil® intramuscularly and 7½ mgms. of Apresoline® intramuscularly. Three hours later, his blood pressure showed a general fall. About twenty-seven hours after admission, his blood pressure had fallen to about 120/70. He was, however, still rather lethargic with rapid respirations and a rapid pulse. One hour later, a venous pressure was done and this was 250 cc. of saline. His lungs were clear on auscultation. Digitoxin, 0.6 mgm., was then given by the intramuscular route.

On the morning of the 16th, about thirty-six hours after admission, the patient had a total twenty-four urinary output of 450 cc. with a specific gravity of 1.020. The albumin was 1 plus. There was no gross hematuria. He remained normotensive throughout the entire twenty-four-hour period following the use of antihypertensives, requiring only one more injection of 7½ mgms. of Apresoline when, at one point, his blood pressure was reported at 140/90.

During the second twenty-four-hour period, he also received two injections of 0.2 mgm. digitoxin intramuscularly. On the morning of March 17, approximately fifty-six hours after admission, he had a twenty-four-hour urinary output of 1000 cc. The specific gravity was 1.010 and there was a trace of albumin. At this time, he appeared much more alert and responsive. His urinary output continued adequate thereafter and he remained normotensive. He had been getting procaine penicillin 600,000 units twice a day since admission and this was continued. On the morning of March 17th, he was also given an additional 0.2 mgm. digitoxin intramuscularly for a total dose of 1.2 mgms. over a period of about thirty to thirty-four hours. Shortly thereafter, he was noted to have a bradycardia. The digitoxin was stopped.

Over the next three weeks in the hospital, periodic urine microscopic examinations showed only occasional white cells, red cells, with occasional hyaline casts. He made a rapid

recovery and was discharged on April 4th, about three weeks after his admission.

I mentioned before that his electrocardiograms were essentially negative. However, the last three, taken the 17, 18 and 19th of March, showed a bradycardia. On the 14th, a nose culture showed Beta-hemolytic streptococci; a blood culture was negative. On the 17th of March, his antistreptolysin O titre was 625 Todd units and his C-reacting protein test was 4 plus.

This graph shows that, on admission, his BUN was 40, the next day it rose to 49. Within about six days following his admission, his BUN fell to normal levels and remained so.

DR. LONG: Thank you very much, Dr. Stifelman. That was a nice presentation and the discussion will be continued by Dr. Glotzer. First, we'll have the films.

X-RAY REPORT: The initial chest x-ray taken on March 18th: It showed an increase in the transverse diameter of the cardiac shadow, indicating the generalized enlargement of the heart and there was also some increase in the bronchovascular markings bilaterally, indicating some pulmonary congestion.

The repeat x-ray film taken on the 24th showed a slight decrease in the size of the heart, as compared to the earlier film, and an increase in the prominence of the bronchovascular markings. This second film showed there had been some improvement in the cardiac status.

DR. LONG: Thank you.

DR. GLOTZER: The major interest in this patient from our standpoint was the relative infrequency with which we see instances of acute glomerulonephritis, particularly on the adult wards of King County. We were interested in watching the progress of it because I can't remember having seen one on the adult wards in the past few years.

This patient showed most of the important aspects of an acute glomerulonephritis from the standpoint of its origin, the initial infection, the complicating factors and the dangers which appear and, of course, the recovery. I

should like to make several of these points more emphatic.

In the first place, with regard to etiology, the general consensus today is that there is a nephrogenic type of Beta hemolytic streptococcus, group A, usually of type 12, which is involved in most of these cases, although there have been case-reports where it was not found. On the whole, though, in those cases where there is no streptococcal infection, as indicated by no elevation in the titre of either antistreptolysin or antihyaluronidase, these patients rarely develop edema or hypertension, they rarely develop a marked impairment of renal function, and, on renal biopsy, there is much less damage, and, of course, recovery is much faster. So that, in the main, we can consider that most of these instances of nephritis are due to a type 12 infection. Types 4 and 25, I believe, have been found in a lesser degree. Other organisms have been implicated, the streptococcus viridans which gives you more of a focal type of glomerulonephritis, although a generalized type has been reported in subacute bacterial endocarditis. Of course, in pneumonia, pneumococcal nephritis has been described.

The question of clinical diagnosis, then, is made by getting a history of a previous pharyngitis or tonsillitis caused by the streptococcus, followed in a variable period of time—usually from five to fifteen days—by the acute nephritis. It is not quite as constant a sequence as one would find in acute rheumatic fever, but if one were to do microscopic examinations of the urine in all cases of streptococcus infections of the throat, it is possible that a diagnosis might be made extremely early by the finding of a microscopic hematuria. This has been demonstrated in a survey of an epidemic streptococcus infection with acute nephritis in an Army camp, not too long ago. The diagnosis would depend then on the appearance of a tonsillitis or pharyngitis followed by an elevation of the titre of ASO (antistreptolysin O) or the antihyaluronidase factor followed by microscopic or gross hematuria with elements in the urine such as albumin and casts, but

the appearance of red cell casts is fairly diagnostic of an acute glomerulonephritis.

The dangers which may occur during the course of nephritis are, in general, two. One is the possible development of a hypertensive encephalopathy, of which this patient showed some of the features. However, the beginning encephalopathy responded fairly promptly to therapy. This is an interesting factor since it represents a form of treatment which, for a long time, was not available for the control of the hypertension in these patients. I believe that the bradycardia which he developed subsequently may have been due to the Serpasil which was used or to the Apresoline.

The second possible difficulty which one may have to face, is cardiac failure. The actual cause of a cardiac failure in the course of acute nephritis is not well understood. The pulmonary lesion which one sees, which is described as uremic, gives the ground glass appearance in the central portion of the lung. This is believed to be due to pulmonary edema. It is not the same as the ordinary pulmonary edema, in that the alveoli are filled with an edema fluid which contains red cells and fibrin and coagulates quite easily, so that it has a high fibrinogen content, which makes it somewhat different from the ordinary edema fluid.

As to the prognosis in these patients, there is a very low immediate case-fatality rate, and, as a rule, there is a low rate of chronicity at this age. Those patients who do develop chronic glomerulonephritis, probably have been subjected to more than one acute infection or have had a persistence of infection which has gone on for a much longer time than one would anticipate.

In the prevention of acute glomerulonephritis, the question of penicillin therapy, of course, always comes up. If it is given in the early phases of an acute infection in the throat and prior to the development of acute glomerulonephritis, I would suspect that there would be a prevention of the disease in some instances. However, given after the development of symptoms or signs, it has had very little effect in changing the course of the dis-

ease. Gamma globulin has been tried; it has been unsuccessful and, some feel that instead of improving the condition, it makes it worse, as hematuria has been noted to increase following the use of gamma globulin.

Treatment, then, is extremely limited since most of these patients will recover. The points to watch for are the appearance of a hypertensive encephalopathy and the appearance of cardiac failure, both of which should be treated as they would be treated in any other condition, such as was demonstrated in this patient. Limitation of protein has not been of significant value, but the restriction of salt, rest, maintenance of an adequate fluid balance and, of course, the use of drugs to lessen the hypertension, and digitalis are most important.

The final point which, I think, should be made and which always comes up when a patient such as this boy is seen is whether it is an acute glomerulonephritis or an acute exacerbation of a chronic glomerulonephritis. That differentiation can be made if there has been a history of a previous attack, if there has been a previous episode of edema and if you find chronic retinal changes. This patient had none. Also, the early appearance of the nephrotic syndrome would be in favor of a chronic glomerulonephritis with acute exacerbation.

DR. LONG: Thank you very much, Dr. Glotzer.

I am reminded, at this point, about the fact that, I think Dr. Longcope's studies in Baltimore over a period of almost twenty-five years and which, unfortunately, were never finally written up, showed that there are, interestingly enough, two kinds of what we will call acute glomerulonephritis, one type following acute streptococcal infection as we have seen this morning in this 13-year-old boy. Acute glomerulonephritis differs from rheumatic fever in that the streptococcal infection, followed by nephritis, may occur anywhere. It can follow an impetigo, it can follow a streptococcal sore throat, it has been seen to occur when there was a streptococcal pneumonia and in a number of other types of hemolytic streptococcal

infections. This type has a very good prognosis, if the patient is under the age of puberty. I think between Dr. Harriet Guild's and Dr. Longcope's figures one came to the conclusion that about nine out of ten children would get completely well in varying periods of time, and that once well, the child seemed to be immune from having a second attack of acute glomerulonephritis.

Then, there is the second group which Dr. Longcope referred to as acute glomerulonephritis with an insidious onset. A number of you have heard me talk about this patient before—The North Carolina coed who went to a house party at Duke one football weekend and had a wonderful time, except when she got up Sunday morning about noon, having danced most of the night, she noticed that her face looked puffy—and it was puffy. She came into the Johns Hopkins Hospital with glomerulonephritis. There was no history of a previous infection of any type. These patients may go on for many years. One of my very good friends in Baltimore, a physician, has had this type of nephritis for many years. If he were here talking to you, you would think him to be perfectly well and as healthy as anyone here. Still, he has had, I know, for at least twenty-six years, some kind of formed elements in his urine almost all the time, and albumin as well.

It was Dr. Longcope's belief that you never got over this type of nephritis, and that you eventually died a death in uremia. I would feel, differing from Dr. Goltzer a little bit, that the use of penicillin, and I know of the sulfonamides, has hastened the recovery of these people with nephritis. I'm sure that must be true because it was shown very definitely and, I think, Dr. Longcope did publish this particular work on the use of sulfanilamide, which is the only sulfonamide I would recommend one use in acute glomerulonephritis. Following the prolonged administration of it, these people have their urines come back to normal at a rate which Dr. Longcope thought was definitely quicker than in people in his control series.

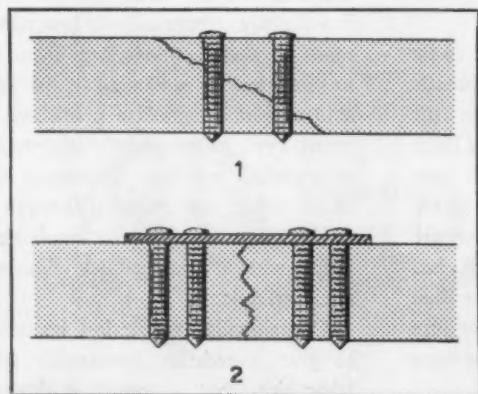
I might point out that Dr. Longcope's studies also showed this interesting thing; that most of these patients take about a year to get well, or sometimes longer, if you use as the criteria of cure three normal Addis tests done at monthly intervals. I became convinced, over the years during which I worked with Dr. Longcope, that his criteria of cure were really the ones which I would desire be used if I had nephritis, because we never saw anyone have a recurrence of nephritis who had had three normal Addis tests. I might also say that a number of these patients first went into what Dr. Longcope called the latent phase. They may be in the latent phase without hypertension and have nothing except occasionally a little bit of albumin, a few formed elements in the urine, or an abnormal Addis test. A patient may be in this phase for a number of years before he either relapses and goes into the stage of chronic nephritis, or gets well. I remember one woman who was in the latent phase for almost four years before she began to show consistently normal Addis tests. She is healthy and well, and is an employee of the Johns Hopkins Hospital where I happened to see her in the hall last Saturday morning.

In adults, in Dr. Longcope's group, about eight out of ten people got well from the type of nephritis which follows hemolytic streptococcal infections.

We have seen a number of these patients with acute glomerulonephritis on the Second Medical Division, but I can't help but feel that we are seeing much less than we did before World War II. I don't know just why this is. People are inclined to believe it's because everytime one gets a sore throat one is given an injection of penicillin. But I have a suspicion that we are in a phase, just about at the bottom of a trough, of the enormous curve of streptococcal infection which has its peak between 1870 and 1880. I won't say that there has been a change in the virulence of these organisms, but there has been a change in the pattern of streptococcal infection, and I think in the next several decades we may well see again another change in the virulence of scarlet fever and certain other types of Beta hemolytic streptococcal infections. Within the past three months, I've seen in this hospital the first instance of erysipelas which I have seen since World War II. I don't know whether Dr. Glotzer trained here in Kings County, but did you have a ward just for erysipelas?

DR. GLOTZER: As a matter of fact we had about twenty beds set aside at the time.

DR. LONG: Well, that was the way it was at the Boston City Hospital when I was an interne. We had a whole area set aside on ward "K" and there were always twenty to thirty patients who had erysipelas in this area.



CLINI-CLIPPING

Fracture Reduction

1. Screws
2. Screws and plate

Hidradenoma Papilliferum of the Perianal Region

JOHN Q. McGIVNEY, M.D.
Galveston, Texas

Occasionally, a situation arises when a surgeon finds himself in a dilemma trying to determine if he is dealing with malignancy or not. The tendency to inflict upon a patient a diagnosis of "a small touch of cancer," either by inference or otherwise, is to be deplored. The impact upon the emotions of the patient and the dilemma which it creates leads to a considerable amount of resentment on the part of the patient and his family. In addition, an economic loss is projected upon the patient through his inability to secure insurance because of the stigma of the diagnosis. It does not take long for a surgeon to learn that the counsel and understanding of a good pathologist is invaluable in his practice—particularly one whose philosophy regarding malignancy he understands well.

In the treatment of tumors of the sweat glands, situations of indecision are frequently created because of the complex nature of the pathology involved. The most common of these tumors is Hidradenoma Papilliferum, a neoplasm arising from an apocrine sweat gland. As in the instance in many diseases which are rare and not death dealing, this tumor has attracted little attention. There are fewer than one hundred instances reported in the literature and only one involving the anal region has been described.

The tumor is of interest because of its histopathologic characteristics. Although considered benign, it often is interpreted in both its clinical and histopathologic aspects to be malignant. The tumor is relatively uncommon, occurs in both sexes and it is usually seen in patients in the forty to fifty year age groups. It does not occur prior to puberty and it has not been found in the Negro race, which is surprising since apocrine glands are three times more numerous in the Negro than in the white. It is usually located in one of the areas where apocrine glands are known to occur—namely the axillary, the mammary, the inguinal, perineal, vulval and perianal areas.

The most common locations are the vulval, perianal and the axillary regions. The lesion is a sharply circumscribed, firm round or ovoid mass or nodule, measuring from 0.5-1.5 cm. in diameter. It is located in the dermis of the skin and may simulate a fibroma or a sebaceous cyst, being slightly elevated above the surrounding surface. Sometimes the contents of the tumor are extruded through an opening in the skin to produce a small raspberry-like lesion with a broad pedicle simulating a pyogenic granuloma.

Occasionally, the lesion becomes inflamed to give a reddish appearance to the overlying skin, but suppuration does not occur.

It is interesting to note that this tumor and intraductal papilloma of the breast are almost indistinguishable histologically which is not surprising since the parenchymal portion of the breast is known to arise from apocrine glands embryologically.

Perhaps it would help the discussion appreciably if we review the apocrine glands briefly.

1. Apocrine gland has origin in the hair anlage, the eccrine gland derived from the epidermis.
2. The apocrine glands are located only in the pubic, abdominal, mammary, axillary, and perianal regions.
3. In addition to sweat, they secrete pigment and a fatty odorous substance.
4. They are compound tubular glands.
5. They are more numerous in women than men and do not function until puberty is reached and the sexual glands have matured.
6. Their activity is increased during the premenstrual period and they become enlarged during pregnancy, especially if it is complicated by eclampsia.

7. They atrophy and decrease in number with age.

8. The distal end of the excretory duct usually empties into a hair follicle.

9. They occur only where hair exists or has existed.

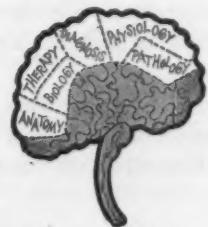
The tumor is a nodular tumor, reddish yellow in color, and consists of epithelium closely resembling apocrine glands. It is not well encapsulated although it is well demarcated. Projecting from the walls of the acini are columns of epithelium which tend to be arranged side by side to give it its papillary nature. The epithelium of the tumor consists of a double layer within the glands; the inner one consisting of a tall columnar layer and the outer one of small, irregular cells comparable to myoepithelium.

The tumor is considered to be malignant by some on the basis of its marked cellularity, frequent undifferentiation and mitoses, lack of capsule and tendency to be locally invasive. However, clinical experience has revealed that these tumors do not metasize and are always cured by adequate local excision.

Summary

1. *Hidradenoma papilliferum may be interpreted as being a malignant neoplasm and lead to an unnecessary radical operation.*
2. *If interpreted in the general sense to be malignant, the diagnosis may serve as an unnecessary economic and emotional handicap to the patient.*
3. *The lesion may be associated with hidradenitis suppurativa, an infection of the glands. The latter disease then should not be treated by cauterization, but by excision and examination of the tissue by a pathologist.*

Box 181, Medical Branch,
University of Texas



MEDIQUIZ

Try one of these questions on a colleague. Each is guaranteed to spark a lively clinical discussion. PAGE 93a

SOME CONSIDERATIONS IN DEALING WITH

Emotionally Disturbed Children

SAUL I. HARRISON, M.D., Ann Arbor, Michigan

Prior to considering a problem as manifold as this one, we should make some attempt to define and delineate the problem. If we were to proceed in a manner comparable to our clinical approach, we would concurrently familiarize ourselves with the person with the problem as well as his environmental setting. We then explore the roots of the problem in the past. At this point we might be ready to formulate a diagnosis and speculate about the prognosis. The foregoing would then be used to outline a treatment plan.

Let us consider some of the problems inherent in dealing with emotionally disturbed children similarly. We shall begin by delineating the problems into:

- (a) individual clinical ones, and
- (b) broader community responsibilities.

As physicians with a patient we invariably have to decide whether therapeutic intervention is indicated. We may be dealing with a predictable transient phase of development that might be indicative of psychopathology only in an older individual. For example, we expect two-year-old children to be somewhat phobic, but we tend to be concerned about similar irrational fears in a nine-year-old. Mild compulsive behavior in a nine-year-old might be of no more concern than phobias in a two-year-old. The practicing physician should be familiar with such and many other developmental considera-

tions. An excellent source of this material is *Emotional Problems of Living* by O. S. English and G. H. J. Pearson, published by W. W. Norton.

We have to be able to adjust to the difference between the reasonable adult who may request assistance and the child who rarely wants or appreciates help when he in fact needs it. We are most frequently consulted about emotionally disturbed children who upset those about them while the child may be totally unaware of internal discomfort. Much less often do we have an opportunity to help the "too good" inhibited youngster who in reality may be more ill than the troublesome acting out child.

If treatment is indicated, we have to determine the type and scope. Is it within our capabilities or should we refer the youngster and his family to a Child Guidance Clinic for consultation and/or treatment? Are we sufficiently familiar with the specialized people and/or agencies in our area who might be of help? How acquainted are we with their methods?

In a brief survey of such a broad area we can cite examples of but a few of the available techniques. Regardless of the type of treatment

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offered the youngster, we generally have to help his family also. In fact, there are instances in which our efforts should be concentrated on the environment. In the following example, the child was never seen.

● John at nine years of age, was the youngest of four children. His father was the Chief of Police in their community. His mother was a successful and contented homemaker. It was three months after John had started fourth grade that the counselor at his school consulted me about John's classroom behavior. She related that towards the end of the first week of school John started to clown. This had progressed to the point where his immature and bizarre antics precluded any academic work for him and made it most difficult for his classmates. This was in marked contrast to his previously excellent adjustment. The counselor was appropriately impressed by the fact that his behavior outside of his homeroom remained acceptable. He continued to do well with his family, Cub Scouts, playmates and in school at gym, music and manual arts. She summarized by saying that he was wild only in the presence of his classroom teacher, who was described as a seasoned and respected teacher.

In a subsequent interview with John's teacher, I was struck by her interest in John's family. She had known and liked his older siblings even though they had always been in "the other fourth grade." She was pleased when John was assigned to her class because they were "such a wonderful family." Much later in the interview she inquired if John's behavior was not typical for the children of policemen. In drawing her out about this, she told me that her own father had been a one man police force in her home town. She and her siblings felt their father's position precluded anything short of exemplary behavior. She recalled a persistent desire to rebel, the gratification of which she had successfully suppressed.

I tentatively suggested that it might be possible that she was *unconsciously* encouraging John's misbehavior and vicariously enjoying it. I asked her not to pass immediate judgment on this possibility. I proposed that she give it some thought in the interim before another interview.

At our next interview she greeted me eagerly, stating that she had examined my suggestion from every possible angle. She was sure it did not apply to her and John because since our last interview his behavior had changed so dramatically for the better.

The following is another instance where the therapeutic approach was limited to the child's environment:

● George, aged seven, started awakening several times a night shortly after his father, a soldier, was transferred. Initially their new physician felt that the move was upsetting and that his sleep would once again become restful after the passage of time. When this did not prove to be so after several months, the physician discovered that George, his three-year-old sister and one-year-old brother were all sharing their new apartment's only bedroom with their parents. At their previous home each child had an individual bedroom. The physician suggested that the parents sleep in the living room and the children share the bedroom. This environmental alteration resulted in relief of George's sleep problem.

In contrast to these two examples of environmental manipulation, most psychotherapy enables the child through the vehicle of *self-understanding* to further develop his potential. This is accomplished by liberating for more constructive use psychic energy that is expended in defending against fantasied dangers. The youngster is generally unaware of these unreal dangers, as well as his fear of them and his defenses against them. With the awareness that psychotherapy encourages, he can evaluate the usefulness of his defensive maneuvers and relinquish the unnecessary symptomatic ones. The medium of communication is the child's play as well as his verbalizations. The child gains support from the consistent understanding and accepting relationship with the therapist. (The Big Brother organization is an example of relationship therapy in pure culture. It is indicated for boys who are deprived of an opportunity to relate to an adult male.) Additionally, there are varying degrees of remedial educational guidance and opportunities for emotional release in most therapeutic undertakings. It would occupy too much space to detail an example of the usual sort of psychotherapy. Therefore, I will limit myself to an example of "release therapy" wherein the aim is exclusively the freeing of pent-up emotions:

● Jane was a happy, well nourished three-year-old only child when her mother was confined for delivery. Although Jane was well cared for by her grandmother during her mother's absence, her appetite became finicky. After mother and the new baby came home, Jane ate less and less until her intake diminished to a few sips of milk a day. Concurrently, she manifested absolutely no signs of sibling rivalry. As her food intake had decreased, her sweetness to the baby and consideration for her mother had increased.

In view of her age and the acute traumatic onset of the anorexia, I decided to utilize release therapy. Instead of inviting Jane to play with toys of her choice as one would ordinarily do in psychotherapy, I directed her to play with specific toys, which I had previously selected. They were a little girl doll, a baby doll, mother doll, father doll, baby bottle, toy crib, and toy table and chair set as if for a meal. I had some cookies placed on the side.

Initially she did little more than look at the toys. Later she fingered them tentatively. In subsequent visits her play became increasingly animated. During the fourth visit she had the little girl doll attack the baby doll and smash the bottle. In the next visit, the little girl doll also attacked the mother. While doing this, Jane reached over for a cookie. Her intake at home increased concurrent with this emotional release. Her behavior at home became less docile.

This sort of approach is limited principally to pre-school age children with acute traumatic psychopathological syndromes. The reader who is interested in acquainting himself with examples of more widely applicable psychotherapeutic endeavors might read H. Lippman's *Treatment of the Child in Emotional Conflict*, McGraw-Hill.

The magnitude of the broader community problems are best defined by recalling some statistics so well known that I doubt that we need recite them. No matter which we would select, they would invariably underscore some frustrating experiences we have all shared. The availability of treatment for emotionally disturbed youngsters does not begin to meet the demand for help.

This overlaps with the second part of our approach—the person with the problem. Too often an unfortunate search for the culprit re-

sponsible for the so-called "mess in mental health" takes place at this time. We have all heard governors accused of failing to provide for adequate mental health budgets. Some people prefer to incriminate legislators for refusing to appropriate sufficient funds. Others say the general populace would refuse to tolerate the increase in taxes. There are others who retort that even if there were sufficient funds there wouldn't be enough trained personnel to utilize them. Thus, it is the medical schools, other psychiatric training centers, schools of social work, university departments of psychology, schools of nursing, etc., who are delinquent in their responsibilities. Some look elsewhere and state that it is impossible to adjust to a society such as ours. I have even heard it said that the difficulty is the result of too many people letting too many things bother them and thereby needing psychiatric help.

By this time I imagine we all feel a kinship with the confusion felt by the mother who was asked by her son at the end of an active day, "Mommy, was I a good boy today?" His mother, not wishing to interfere with his self-concept while desperately wanting to do something about his mischievousness retorted, "You're never a bad boy—you're always a good boy—although you did an awful lot of bad things today." He was not satisfied: "Mommy, wouldn't you like it better if I were always a bad boy who did only good things instead of always being a good boy who did only bad things?"

The next item on our agenda is the environmental setting of the person and his problem. For the sake of brevity, I shall neglect the vital question of the emotional climate of the individual home and the community at large. One aspect of the environmental setting, that is germane to every community faced with the problem of the excess of demand over supply of treatment for emotionally disturbed children, is how to attract and keep professional help after the positions have been created and the funds allotted. I am afraid that mental health professionals often seem like difficult prima donnas. We seem to require a stimulating atmosphere

where we can enjoy an interchange with people who share our individual scientific problems. Too few of us are pioneers. Lacking that, we seem to want more money so that an apparently anomalous situation is created. The community that is about to pioneer in such an endeavor has to be willing to pay higher salaries than the community in which such services are well established and the citizenry is convinced of their value.

More important than confreeres or income is the need to feel that we are accomplishing something with our skills. The majority of us are more content doing a lot of good for fewer patients than doing something inadequate for large numbers. The community has to tolerate this peculiarity, if you will, and also protect us from the pressure of their overwhelming needs until we develop more efficient techniques.

This would seem like an appropriate time to explore the roots of the problem in the past. We do not have to go back very far because the treatment of emotionally disturbed children is relatively new. The custodial care of mentally defective children was the principle endeavor of child psychiatry until recently. Several historical events around the turn of the century presaged the change. In our individual work with children the most important was the development of *dynamic* psychiatry. Sigmund Freud, in Vienna, and Adolf Meyer, in this country, contributed a great impetus to the development of child psychiatry by their appreciation of the influence of the early years of life on future emotional development. Around the same time, Binet and Simon, in Paris, developed psychometric tests in an effort to estimate innate intellectual endowment. Just before the turn of the century Juvenile Courts were established so that children who broke the law, were not dealt with in the same manner as adult criminals. Dr. William Healey, a pioneering psychiatrist and psychoanalyst, applied dynamic psychiatric principles in his work with Chicago's delinquent children. It was not until the third decade of the twentieth century that the first child guidance clinic, as

we now think of them, was established in Boston.

Shortly after the turn of the century, a law student named Clifford Beers was hospitalized for emotional illness. After recovery, he devoted his energetic brilliance to the betterment of emotional health. His autobiography, "A Mind that Found Itself," created quite an impact. He founded the organization that is now called The National Association for Mental Health.

It was as recent as 1959 that subspecialty certification in Child Psychiatry was established by the American Board of Psychiatry and Neurology, Inc. The requirements for examination are four years of residency training followed by two years of experience in child psychiatry. The applicant must have been certified previously in Psychiatry by the parent Board.

Diagnostically, we do have problems, but we do not have a "mess" that we need blame some one for. Our situation is similar to that of the rest of medicine. We are younger. The first physicians were created in part by the demands of the ill. The subsequent development of specialists seems to be the result of a comparable impetus. The mentally ill, especially the young, are less effective in expressing their needs than any other group of patients. Thus, the response to these needs has been delayed.

Prognostically, statistics make it look like our children's emotional problems are increasing. Most observers feel that this is largely a consequence of increasing diagnostic acumen. I do not say this to lull us into complacency. On the contrary, I take issue with the elder statesman who felt reassured when an archeological excavation unearthed an ancient tablet demonstrating that many centuries ago people were equally as worried as our parents were and as we are, that the future is gravely imperiled because of the shortcomings of the younger generation. When we consider the technological advances that have accrued through the ages, should we not be concerned over this lack of progress in human relations?

Perhaps the persistence of the worry about the younger generation is symptomatic of a chronic deficiency in constructive communication between adults and youth.

Our last task is the formulation of a treatment plan. Clearly, therapeutic intervention is indicated. We need to train more mental health professionals. We need to sharpen our tools—constantly improving our techniques of treating emotional problems and developing the facilities required for modern treatment. We must increase and refine our efforts at prevention. In this realm, the family physician's role

is paramount. It might be nihilistically argued that we cannot hope to prevent what we are still clumsy in treating. This should not deter the physician for there are a host of diseases that we know how to prevent far better than we know how to treat.

Lastly, we should not destructively waste our energies looking for someone to blame for the manifold problems inherent in constructively dealing with emotionally disturbed children. Mental health is everyone's affair.

1313 East Ann Street



POTASSIUM DEFICIENCY IN ANOREXIA NERVOSA

Seventeen reported cases of anorexia nervosa with hypokalaemia are summarized. Eight showed some evidence of renal disorder. Habitual purgation complicated the only case shown to have the tubular lesion of potassium depletion.

Three further cases with hypokalaemia are described, one showing tubular vacuolation.

It is thought that the potassium depletion is due to a deficient intake, aggravated in some cases by vomiting, and in some by purgation. Malabsorption may be more certainly excluded if further cases become available.

Fatal paralysis and possibly irreversible renal changes may occur if this complication is not recognized. Five of the twenty patients had died at the time of reporting.

Conventional treatment should correct the deficit, but oral or intravenous potassium chloride may prove necessary.

R. D. WIGLEY, M.B.

Brit. Med. J. (1960) No. 5192, Pp. 110-113.

SOCIAL SECURITY

... A Humbug on Youth?

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Recently, two articles appeared in the *Wall Street Journal* (June 29, July 26) which had to do with so-called "Social Security" (O. A. S. D. I.), and which were followed by a deluge of letters to the same publication, a number of which were published in the issue of the *Wall Street Journal* on August 11. These articles, the first by Mr. Ray M. Peterson, Vice-President and Associate Actuary of the Equitable Life Assurance Society of the United States; the second by Professor Wilbur J. Cohen, a current Assistant Secretary of Health, Education and Welfare, who, according to one letter-writer, "has written all of the Social Security Act legislation . . . or has been a powerful figure in the writing," deal with the great "pros and cons" of social philosophy, as such have developed in relation to "Social Security" in our country during the past twenty-seven years.

We feel that by presenting the readers of MEDICAL TIMES with a consideration of these two articles and the correspondence which they evoked, another facet of the great debate which is developing in this country between "conservatives" and "liberals" may be better illuminated for them. Certainly, in these two expositions the proposition of the orthodox and time-tested method of financing one's needs in

old age is contrasted with the developing theory of "social adequacy" best portrayed in Professor Cohen's own words: "I would hope that as our society becomes more affluent it will recognize that it can afford to do more for its *disadvantaged* (italics ours, Ed.) members . . . than it does now through private and public insurance and other social programs." In other words, the old "soak-the-rich" philosophy.

Before we get into the discussion of the "pros and cons," let's figure out what we are talking about. We are considering the proposition, that in financing a national old-age pension and care program, should we adopt a policy of prepaid, full-reserve financing which the law of the land and the collective wisdom of the insurers and the insured provide for you and me when, free from compulsion, we go out, shop around, and buy ourselves the best annuity or old-age insurance policy (contract) that we can for our money, or should we adopt a national "pay-as-you-go" (another name, "hope-as-you-pay") method of financing which all of us who have ever had a "Social Security Number," or who have employed such individuals have been compelled to participate in? The "New Frontiersmen," if they have their way in their attempts to provide "pie in the sky," will have us on a "pay-as-you-go"

program from the "womb to the tomb," including all stop-offs along the way (probably "post-paid" would be a better description).

The type of insurance which you and I freely buy, when we have a dollar or two left after supporting thirty million governmental employees, paying for roads, military and political security (?), helping the heathens, buying military hardware, paying for agricultural surpluses, Alliances For Progress, and heaven knows what else is characterized by "Full-reserve financing . . . All benefits are fully paid for or financed during years prior to the time they are entered upon. Under full-reserve financing, the dollar sum of all payments into the fund together with the interest income earned from its investment is sufficient to pay off all liabilities for guaranteed or promised benefits. No benefits are promised beyond what can be provided for—at any given point in time—by payments into the fund, plus interest earned. Full-reserve financing . . . is the test of actuarial soundness and it is the only concept of actuarial soundness with which the American people are generally familiar" (Peterson). Furthermore, it is pointed out that under full-reserve financing of this type of private insurance "the principle of individual equity is preserved; i.e., there is a direct relationship between contributions and benefits; one receives as insurance or annuity coverage exactly what one pays for." Finally, as letter-writer, Davis H. Roenisch, an actuary, summed up the principle of true insurance: "A most important characteristic of insurance is the protection people acquire by pooling small amounts to offset the risk that any one of them will suffer a large loss." It would seem to us that all of our readers are familiar with the concept of insurance which has just been discussed.

But now let us take a hard and searching look at the philosophy and thinking which is back of "social insurance," "Social Security," or call it what you may. To begin with we have to consider the growth of the idea and theory of "social adequacy." According to Peterson, it was defined by Hohaus in 1942 as follows: "The measure of protection should

be 'social adequacy' for the insured and their families—that is, it should represent, as far as practicable, a basic layer of protection. 'Social adequacy' usually makes it impractical to have 'individual equity' for the insured in the sense of a mathematical quid pro quo return on account of the contributions made by or on behalf of the individual. A socially adequate benefit provides income sufficient as basic protection against want and destitution, and, consequently, may be much more, or even much less, than an 'equity' benefit." Now any income which is "socially adequate," by its very nature, must include "a large element of unearned benefit and unearned increment for most of its members." *However, for the youngster who is being taxed to provide for current and future "social adequacy," the shoe is on the other foot and may in the end pinch very badly. A definite inequity may accrue to him as he works to provide social adequacy for others, at the risk that he may never have it himself.* Of further interest is the fact that the social planners (the true anti-Newburghites) who advocate markedly expanded social programs have, according to Peterson, "dropped the adjective social and speak only of adequacy." Peterson then lists certain of these "adequacy" advocates. The first among the equals of them is of course none other than Professor Cohen from "Soapy" Williams' state, who, publicly tooting his horn for greater adequacy says: "Speaking of the 50-50 payroll tax financing . . . there was no reason why it could not be 40-60 or have the Government make a substantial contribution." After all, what does this man want? To destroy the affluent society which is going to support all of his socialistic schemes? That's what his scatter-brained proposal would do. Next Mr. Peterson reports another advocate of "adequacy," one, Nelson H. Cruickshank, (B. D., Union Theological Seminary, 1929) a former social worker, now Director of the A.F.L.-C.I.O. Department of Social Security, as saying: "The proportion of present earnings that is represented by benefits on retirement must be materially increased for workers in the middle and upper income brackets. A

worker with average wages in industry today receives only about 30% of his present earnings.

In order to keep pace with the rising levels of living and to maintain confidence of the system on the part of those in the middle and upper wage ranges, he should receive 25 years from now, or sooner, at least sixty percent of his earnings on retirement."

Currently based on average wages, "the primary amount is about 32% for an employee, and a total benefit of 48% for a married couple."

As Peterson points out, the enactment of the proposals of Dr. Cohen and Mr. Cruickshank "could increase the permanent Social Security debt to more than *one-half trillion dollars*." (Italics ours, Ed.) Why people with ideas such as these never seem to realize that money doesn't grow on trees has puzzled us. The fact that money can be printed cheaply, rapidly, and with beautiful design is what worries us, and the talk-talk of the future put out by these so-called "social thinkers" (?). They play so fast and loose with your money and ours using the fictions as the Professor Cohen does of "government money" and "public insurance!" Well, so much for the prophets of the "higher orders of 'adequacy'" for the time being.

Let's now take a look at the current scene and attempt to analyze without an over-lay of emotion, one way or the other, "the true nature of our Social Security financing mechanism." To begin with, we must always bear in mind that its evolution has always been in the hands of politicians and not in the hands of men whose fiscal judgment is not myopic from having kept their eyes for years on the ballot box. Since 1939 there has been, according to Peterson, a steady and undeviating trend (regardless of the Administration holding political power) "from substantial individual equity towards social adequacy, and the financing method has become a mixture of full-reserve financing and 'pay-as-you-go,' with the latter far outweighing the former." Peterson lets the Chief Actuary of the Social Security Ad-

ministration (Robert J. Myers) tell this story which is as follows:

"The issues of underlying philosophy for an old-age benefit formula under the social insurance approach have been summed up in the expression 'individual equity versus social adequacy.' It was generally recognized that individual equity is of paramount importance in administering voluntary old-age insurance on a sound financial basis, since each individual has the right to purchase insurance or not as he wishes. However, under a governmental social insurance plan, the individual equity in the relationship of the individual's future benefit to his current contribution is not essential to financial soundness, since the individual has no choice as to being covered or as to his rate of benefits or contributions."

The issue was resolved in the 1939 Amendments by a major change in emphasis as a result of which, the old-age benefit formula is based largely on the adequacy concept,—and thus to only a small extent on the equity concept. . . .

"The principles upon which to base the financing of old-age and related benefits in a social insurance system have been discussed at great length both in this country and abroad. . . . This debate was especially active early in the development of our old-age insurance system, when the size of the fund was a burning question. As is often the case in this country, the answer was arrived at through a pragmatic (practical) political process rather than through a theoretical philosophical process." Then in the words of the Chief Actuary mind you: "As is also often the case, the pragmatic process has resulted in an answer which to date at least has worked out satisfactorily. Just as the benefit formula is a blend of equity and adequacy, with much greater emphasis on the latter, so is the financing method a blend of 'reserve' and 'pay-as-you-go' with the latter having the greater weight." As Peterson has pointed out currently this blend may be "so bland as to blind us to blunders."

A further description of the "pay-as-you-go" system is included in an opinion of the Supreme

Court, dated June 20, 1960, quoted by Peterson: "The program (Social Security) is financed through a payroll tax levied on employees in covered employment, and on their employers. . . . The tax proceeds are paid into the Treasury as internal-revenue collections . . . and each year an amount equal to the proceeds is appropriated to the Trust Fund from which benefits and expenses of the program are paid . . . Persons gainfully employed, and those who employ them, are taxed to permit payments of benefits to the retired and disabled, and their dependents. Plainly the expectation is that many members of the present productive force will in turn become beneficiaries rather than supporters of the program. But each worker's benefits, though flowing from the contributions he made to the national economy while actively employed are not dependent on the degree to which he was called upon to support the system by taxation."

Now all of this may sound mighty fine to many who have only heard about the benefits but who have never considered either the morality or costs of Social Security; i.e., social adequacy. From the point of view of morality, the whole program as laid down by Congress since 1939 is both politically and intellectually amoral. New groups have constantly been covered and benefits have been increased, while tax increases have been deferred, and in the last few years, when increased, sufficient taxes to cover the promised and factual benefits have not been laid on. Now a number of the politicians, including Ribicoff, Nelson Rockefeller, Forand and McNamara are thumping the tub for "Elder-care" without facing up squarely to the costs of this program and on Ribicoff's part, blandly stating that after carefully surveying the Bill he could find nothing socialistic in it! What rot! What nonsense! Elder-care will cost the taxpayer far, far more than will be admitted by those who are sponsoring it at the present time. Almost \$3 billion per annum to start with. Who will pick up this tab? Not us! We're getting old. But rather a heavy burden is being placed on the shoulders of our children and grandchildren just to satisfy

the hopes of one politician or another that he will get a few more votes, or that the political theories of a number of "social planners," may be tested in the fires of experience.

As Peterson points out, you don't have to be an actuary to realize that if large numbers of people receive benefits greater than the taxes paid, someone, someday will have to pay for it, unless we go through national bankruptcy. We are piling up an enormous debt—and a debt, while national in one respect because it is created by Acts of Congress, nevertheless does not have the same legal character as the National Debt. It is created under that section in the Social Security Act which permits Congress "the right to alter, amend, or repeal any provision" of the Act! Now as has been pointed out, our children "can either pay off the debt or they can settle for just paying the interest on it."

Which will they do? Take a look at what has transpired and will go on. As Peterson puts it, "Under the 1956 Act, the debt arising out of unearned increment was estimated at \$259 billion. (Italics ours. Ed.) This is the difference between (a), the present worth \$486 billion, of all future benefits and expenses for all persons then (1956) O.A.S.I. members and (b), the sum of present worth, \$194 billion of all future taxes with respect to such members and the Trust Fund, \$32 billion.

The corresponding present worth of unearned increments at the end of 1958 was \$289 billion. Estimates of the writer (Peterson) based on available data show the debt growing from about \$150 billion under the 1952 Act to \$200 billion under the 1954 Act, and on to about \$300 billion under the 1958 Act. The 1960 Act will produce some further increases. And a very serious fact is, *there is no reserve fund to reduce this debt.*

Then too, the Social Security tax structure is of a type that the combined tax of new entrants will always exceed the benefits that the new members will receive. In 1954, a constant, combined employee-employer tax of seven percent was needed to pay all future

benefits guaranteed by that Act. Under the 1958 Act a constant combined tax of almost nine percent was needed to provide future benefits. And here is an important point made by Peterson in relation to young entrants into the system. "Under the 1954 Act, the value of total new entrant taxes was 152% of the value of the benefits . . . under the 1958 tax this became 166 $\frac{2}{3}$ % . . . There is no intrinsic reason which this cannot exceed 200%." This means that the average new employee more than pays his way.

Well then what is going to happen? First of all it is obvious that this growing Social Security debt will never be paid off. This means that the debt is permanent and young people to infinity (or to the period when the sins of Congress are visited on our people) in the form of wild inflation which will wipe out all fixed debt, will have to pay interest on an increasingly larger and larger debt. IT'S QUITE A PRICE WE ARE PAYING FOR "SOCIAL ADEQUACY" IN THE FACE OF MEDICAL ADVANCES AND A POPULATION EXPLOSION!

Up to this point, we have portrayed but one side of the coin. Let us study the retort to Mr. Peterson of one of the more literate and vocal advocates of Social Adequacy, the "greener pastures" of adequacy, and whatever may be just beyond. What did the Professor Cohen have to say? First, as with all socially-minded, professional egg-heads, he attacked under the cover of a smoke screen of self-righteousness. Peterson, he says is trying "to discredit O.A.S.D.I." and "shake the people's confidence in it." He believes that the O.A.S.D.I. "as enacted by Congress is financially sound and that the method of financing Congress has provided is sound." The good (or wicked) Doctor Cohen—depending upon how you feel about his views—is constantly returning to the point that O.A.S.D.I. is financially sound because Congress makes it so, completely ignoring the fact that it is just his beloved "Congress" which has enacted the type of legislation which makes it financially unsound.

Professor Cohen then goes on to try to say that private insurance and social insurance instead of being quite different as Peterson pointed out, "have many attributes in common." He says governmental old-age support programs exist in many countries. Social insurance (coined by socialists and social planners, not by the insurance fraternity) then becomes, according to Cohen, the term to use to describe this type of governmental support of the aged. It is proper to use this term, he says. With this, Dr. Cohen drops his discussion of common attributes.

Next he states that the two types of support for the aged (private or social insurance) "differ in some respects." First and most important in his mind is the nature of the "rights" to the insurance. O.A.S.D.I. is spelled out in an Act by Congress, hence the right is legal. Private insurance is a contract between the purchaser and the insurer. The terms of the latter are spelled out and fixed, while with O.A.S.D.I., by statutes the whims of Congress influence its course. Secondly, private insurance is based on reserves which cover all contingencies under the contract. Actuarially it is sound. The reserves for O.A.S.D.I.; i.e., the Trust Fund are relatively small in comparison with what Congress promises the so-called insured, and in an amazing sentence of Professor Cohen, he states, "*Social insurance . . . is actuarially sound as long as it operates under a plan of financing which is designed to provide income sufficient to meet all benefit costs as they fall due.*" (Italics ours. Ed.) According to this definition of "actuarial" soundness the risks of the program are calculated for or by that collection of risk-experts which we call our Congress. In other words, the "soundness" of the financing of O.A.S.D.I. (and for that matter all Federal dole programs) depends upon the caprices of *succeeding Congresses!*

It certainly seems clear that the Professor is mixing up financial soundness with his concept of "actuarial soundness." Certainly, as long as Congress votes compulsory taxes and digs deeper into our pockets, O.A.S.D.I. will be

financially sound, but never, no never, Professor, will it be actuarially sound!

Thirdly, Professor Cohen sees no imposition on the young people entering the system and says, apropos of the fact that they will pay in considerably more than they will ever get out of the program: "Actually, there is no reason why younger workers should feel that they are being treated inequitably. Moreover, those who understand the protection they are getting in return for the contributions they pay will certainly not feel that way. What the younger worker is getting under Social Security is insurance coverage, that can, and in all likelihood will, be increased by Congress as wages go up without a corresponding increase in the contribution rates." This is a good example of tortuous (or should we say tortured) thinking we have to contend with when talking with these social planners. As Peterson pointed out and as some of the letter-writers agreed, if an employer asked him "whether he can obtain larger benefits for new employees with the same joint employe-employer contributions," Mr. Peterson would reply "about 80% of joint employe-employer taxes involving your new employees is for old-age benefits for the employee, his wife, or widow. The remaining 20% is for survivor and disability benefits before retirement. *Depending upon the marital status and the sex of your new employees and the rate of earning, this 80% of taxes would buy under an Equitable group annuity contract, at our present rates, 40% to 60% more in old age benefits than are provided under O.A.S.D.I.*" (Italics ours, Ed.) It must be remembered that the unmarried contributor and his employer do not create any equity for the unmarried employee out of the money paid in for O.A.S.D.I. If this employee dies his estate receives nothing! Fourthly, Mr. Peterson's use of the term "hope-as-you-pay" riles the Professor who feels this constitutes a derogation of O.A.S.D.I. He also feels that a person as sophisticated as Mr. Peterson "knows that 'full-reserve' financing is neither practical nor desirable nor essential for financial soundness and that any attempt to go to a full-

reserve basis would create serious problems." Probably it would—but not prior to 1939. It's this type of thinking which considers financial soundness as "neither practical nor desirable nor essential" which is getting this country deeper and deeper into a financial morass, with the dollar having a shaky time in the world market, because the starry-eyed egg-heads have had Uncle Sugar Able (old paraphrase code U.S.A.) spending money like the proverbial drunken sailor on welfare schemes for almost a generation. Fifthly, Professor Cohen does not appreciate Mr. Peterson's remarks on proposals designed to extend and enlarge "Social Adequacy." To say that "Social adequacy for some means individual inequity for others" is, according to the Professor, "a play on words." "The program", the Professor goes on to point out, "can be improved to meet social as well as fundamental needs without in any way losing its fundamental 'insurance' characteristic or, on the other hand, becoming a dole." But like all these good Professors, Cohen does not say how this can be done, and we venture to say that if he did, suddenly in the midst of his discussion, we would be forced to say, "Would you please give me back my wallet and get your hand out of my other pocket!" Other people's money is free for the having in the minds of these social planners of all "Deals," "Frontiers," and during those periods when we have never "had it so good." Their actions will plague generation on generation to come.

In his peroration, the Professor gives himself away when speaking of the aged and other relatively non-productive groups, he states that if Peterson's recommendations relative to benefits were adopted, that these groups "would be effectively excluded from getting their fair share of the increasing productivity and affluence of our society. I would not like to see that happen, and I don't think it will." Now the trouble with all this is, who will determine what a fair share is? If the Cohens, the Ribicoffs, the Falks, the Cruickshanks and others of that social and intellectual breed decide this, those who work hard and labor long will face a capital levy as a result of their industry.

The social planners are convinced that they must "rob Peter to pay Paul" or else salvation will be denied them. When it's a nice day they can only think of those "poor women of Newburgh, N. Y."

As though what we have just discussed is not enough, new benefits of an entirely different sort are being discussed in Congress. Benefits for which the recipients will not have contributed *one red cent!* Elder-medical-care. Social Security payees would eventually be eligible and the taxes to provide this care would pay for but a fraction of the benefits. What would the proposals cost in *terms of debt to our children and grandchildren?* Peterson estimates it at \$25 to \$30 billion for the Forand Bill, \$15 to \$20 billion for the Kennedy-Anderson Bill and around \$30 billion for the MacNamara Bill. These would only be starters!

Now what did the readers of the WALL STREET JOURNAL think of this debate? A most interesting thing was that *every single letter coming in on it supported Peterson's view. Not a voice was raised for Cohen.* It might be said that as the readers of the JOURNAL are "economic royalists" this is what one would expect, but this is not true. Many a time its letter columns have contained expositions on the liberal side of many questions. While we won't go into all of the letters, we will quote a few. "Their 'fair share?' By what right can one segment of Society claim a share (fair or otherwise) in the productivity

and affluence of others," (Manhasset, N. Y.). "Those of us who long for the opportunity to take care of ourselves find it ever more discouraging, as big government saps the limited resources which might have given us a chance to exercise initiative during our working years and attain self-respecting security on retirement," (Arlington, Va.). "This is not freedom, taking from one to pay another. Each time the benefits are increased the tax payment must be increased. I have nearly been benefited to death," (Moorse, S. C.). "We are all paying taxes into a general fund which will (or will not, as the case may be) be sufficient to pay a dole." (New York City). "Wilbur Cohen has consistently promoted the idea that Social Security taxes are 'contributions,' and that individuals would be 'permitted, rather than compelled to pay these taxes," (Chicago, Ill.). "If Social Security is as fair, just and good as he (Cohen) claims, why must it be compulsory?" (Sewickley, Pa.)

In conclusion we can think of no better recommendation than that given by Peterson. "Our Social Security system can be preserved only if we keep benefits within the limits of carefully defined social objectives. Abraham Epstein, a pioneer in the development of old age income programs is reported to have said that social insurance is like a drug: a limited quantity can serve a vital need; an excessive quantity can be fatal." We, as physicians, can subscribe to this point of view.



"OFF THE RECORD . . . "

Share a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. PAGES 25a AND 29a

Clinical Pathological Conference

Roosevelt Hospital, New York City

A 50-year-old white widow was admitted to Roosevelt Hospital because of three months of persistent cough, dyspnea and right anterior chest pain.

Present Illness: The patient gave a history of intermittent non-productive cough for many years despite the fact that she was a non-smoker. However, it was only during the three months prior to admission that the cough became persistent and she produced minimal amount of sticky white sputum. She denied hemoptysis. There was an associated tightness and pain in the right anterior chest. Shortly after, she developed exertional dyspnea which soon became persistent even at rest. She also had some anorexia, malaise and fever, and she described a couple of episodes of chills with profuse diaphoresis.

The right chest was tapped in a local hospital about ten days prior to admission. The dyspnea improved, but the cough and pain persisted. A few days later, she went to another local hospital where she was re-tapped with the same results. Finally she decided to come to Roosevelt Hospital.

Systemic Review: Constipation for many years, and fatty food intolerance with postprandial bloating and gaseous eructations. Catechomenia: Menopausal for eight years. No spotting since.

Past History: Negative, except for "sinus condition" with intermittent frontal headache for many years.

Participants

Discussant: DR. WILLIAM W. FIELD
Director: DR. KENNETH T. DONALDSON
Pathologist: DR. RUDOLF GARRET
Radiologist: DR. ALBERT DUNN

Family History: One sister died of brain tumor. Otherwise, not noteworthy.

Physical Examination: T: 99-101, P 80 (RSR) R: 30, BP 110/60. Well developed, well nourished, elderly lady in moderate distress. There was no palpable peripheral lymphadenopathy. ENT: essentially negative. There was no postnasal drip. The trachea was in the midline. There was no neck vein distention. There was no palpable mass in the breasts. The right chest had very poor excursion and there was dullness with markedly diminished fremitus and sounds in its lower half. No rales or rubs could be elicited. There was no calf tenderness or peripheral edema. The rest of the physical examination was not remarkable.

Laboratory Data: Urinalysis (—). Hgb. 11 (Hct: 34). WBC: 6,000-10,000 with normal differential. ESR: 10-30 mm. (corrected). AFB studied on sputum (X 3), gastric washings (X 3) and bronchial aspiration were all negative. Cytological studies on sputum (X 3), uterine cervix and bronchial aspiration were also (—). Viral studies (—). Cold agglutination (—). Skin tests for tb., cocci-

diodiomycosis, brucella and histoplasmosis were all (—). Liver chemistries were normal except for reversed A/G (1.8/4.5) confirmed by electrophoresis. Bence Jones (X 3) (—). LE preps (X 3) (—).

Chest films, including tomographies, revealed right pleural effusion and a rounded density of 1.5 cm. in the pectoral segment of the RUL, near the 4th rib, radiologically interpreted as appearing more inflammatory than neoplastic in nature. IVP (—). Sigmoidoscopy (—), BE (—), GI (—), GB (—).

Hospital Course: Cough and chest pain were the major symptoms during the entire hospitalization and patient did not respond to any therapy. She received two weeks of penicillin followed by four weeks of tetracycline with nystatin, without much effect on her fever.

The right chest was tapped three times at intervals of a few days and each time no more than 200 ml. of fluid could be obtained. These were straw-colored and slightly turbid specimens which clotted shortly following aspiration. Cytological and bacteriological studies (including AFB) were negative with all specimens (Sp. Gr.: 1017). Chest fluoroscopy revealed that the right diaphragm was fixed and that there probably was little free fluid but mostly pleural reaction. Bronchoscopy demonstrated evidence of extrinsic pressure on the intermediate bronchus; this was thought to be caused by the fluid. (Gyn. consultation revealed no pathology.)

Following extensive studies over a two-month period, during which time needle biopsy and exploratory surgery were proposed and refused by the patient, she was discharged. She was readmitted three months later because of weight loss in addition to persistent symptoms. This time, the chest films showed increase in size of the RUL lesion, and P.P.D. #2 was 3 plus for the first time. She was started on antituberculous therapy, given three units of blood for a falling hemoglobin, and a thoracotomy was performed.

DR. ALBERT DUNN: On the initial chest film there is evidence of a moderate right sided pleural effusion. This obscures the de-

tailed study of the underlying parenchyma. However, the upper third of the right lung and the entire left lung appear free of parenchymal disease. The cardiac and aortic silhouettes are within normal limits for size and contour.

On a subsequent study, three weeks later, there is considerably less pleural fluid present in the right hemithorax. However, there is now demonstrated a sharply marginated round density, approximately 2 cm. in diameter, near the lateral chest wall opposite the hilum on the right side.

In addition there is a smaller but similar rounded density overlying the anterior aspect of the right second rib. It is also noted that there is decreased aeration and volume of the right middle lobe. The right leaflet of the diaphragm is also more evident and appears to be mildly elevated. There is no evidence of hilar or mediastinal adenopathy.

Three months later there has been a re-accumulation of the pleural effusion at the right base and an increase in the size of the nodular densities in the right lung.

There is also now some widening of the superior mediastinum on the right which may be due to extension of the pleural fluid along it or to enlarged paratracheal lymph nodes.

Discussion

DR. WILLIAM W. FIELD: The course of this woman's illness extended over a three-month period. During this time the cardinal symptoms were: persistent cough minimally productive, low-grade fever, dyspnea even at rest, pain in the chest, and weight loss.

A review of the past history revealed that the woman was a non-smoker and that she had a slight non-productive cough for many years. There is an additional history of chronic constipation and fatty food intolerance which raises the question of biliary tract disease. The sinus condition and headache, I believe, can be dismissed as non-contributory to the present illness.

An insidious onset marked the beginning of the trouble in the chest in this patient, and throughout the course of the illness the disease

seemed to be limited to the chest area. It is important to note that the woman was in moderate respiratory distress all the time, and the first sign of trouble was the appearance of pleurisy with effusion. Dyspnea is frequently a major finding in pleurisy with effusion. Furthermore, the effusion was recurrent. Repeated chest taps were followed by recurrence of the fluid. At no time was the pleural fluid described as hemorrhagic; instead, straw-colored and slightly turbid specimens were recovered, and these specimens clotted following aspiration.

When the patient arrived at the Roosevelt Hospital, which was approximately two weeks after she first sought medical attention, a parenchymal lesion was found in the right upper lobe. This is described as being a solitary lesion, a rounded density of 1.5 cm., "appearing more inflammatory than neoplastic;" in other words, I assume, rather diffuse and not sharply demarcated. This lesion increased in size over the observation period, and this fact is quite helpful to us.

Scrutiny of the laboratory data reveals only a moderate anemia, a normal to slightly elevated white blood count, a very slightly elevated sedimentation rate. Repeated AFB studies were all negative and so was the PPD until late in the course of the disease when the PPD #2 became 3+ for the first time.

A reversed A/G ratio was found, and this is a very frequent finding in tuberculosis, sarcoidosis, the myeloma family, and in chronic febrile state. It is not very specific for anything.

Skin tests for Brucella and the mycotic group were all negative.

Probably on the basis of the recurrent pleurisy with effusion and fever, she was thought to have a bacterial infection and she received penicillin and tetracycline but without good effect. Chest fluoroscopy then revealed fixation of the right diaphragm, and this should lead one to think seriously of malignancy. Needle biopsy and exploratory surgery were then proposed but turned down by the patient. Thereafter, following the finding of a positive PPD

#2 and a definite increase in the size of the right upper lobe, lesion antituberculous therapy was begun. One can be quite sympathetic with this approach to the problem, however, I have never seen fixation of the diaphragm with tuberculosis.

The problem resolves itself into a discussion of the causes for a parenchymal shadow as described, associated with pleurisy with effusion. Tumors of the chest need to be considered seriously and it is difficult, in view of the progressive nature of this disease to think seriously of the benign tumors. The chondromas, myomas, fibromas, angiomas and hamartomas are slow-growing and are generally symptomless; they tend to be x-ray findings unless they cause pressure or hemorrhage. Pulmonary angioma is a disease of infancy and early adult life. The hamartomas should show stippled calcific deposits by x-ray. The bronchial adenoma, rather common in females, usually reveals itself by atelectasis and not by isolated peripheral parenchymal lesions. Furthermore, hemoptysis is so common in bronchial adenoma that it is difficult to make the diagnosis without this symptom being present.

Metastatic tumors are frequently found in the chest, especially from kidney, thyroid, breast, prostate and large bowel. A metastatic tumor is always possible in a history of this sort, but if so, the primary site must be silent indeed. There is no clue or hint in any part of the protocol to suggest a primary site other than in the chest itself.

A great majority of tumors arising from the bronchus, i.e., bronchogenic, are centrally located and show metastases to the regional lymph nodes. No hilar masses were described in this case. Peripheral types are not common, however, they do occur. Their margins are often described as fuzzy and in such situations may be readily confused with infectious lesions. The alveolar-cell carcinoma is much rarer than bronchogenic disease but is noted to involve the periphery of the lung. It may start as a single lesion and then develop daughter lesions, the so-called pulmonary adenomatosis. It occurs in people past 40 and is characterized by

a stubborn cough productive of water mucous sputum and severe dyspnea. According to the literature, the pleura is not usually involved.

Malignancy

Malignant involvement of the pleura is many, many times more common in the form of metastatic disease than in the form of primary tumors of the pleura. Occasionally, an endothelioma or mesothelioma is encountered. Two types of this malignancy are described, i.e., a common nodular type and a rare diffuse type. It is hard to distinguish the two by x-ray. Hemorrhagic pleural effusion is common with both primary and metastatic malignancies of the pleura.

The characteristics of the fluid does not distinguish them. As I said, secondary involvement of the pleura from the parenchyma is ever so much more frequently encountered than primary involvement.

Of the infectious diseases to be considered, tuberculosis should produce either a fresh, soft, poorly demarcated lesion in the lung parenchyma with hilar lymph node involvement or more extensive involvement with fibrosis and possible cavitations. None of this fits with the x-ray description. Furthermore, the PPD was negative and then turned positive. If the shift was in the other direction, i.e., from positive to negative, a period of anergy might be postulated due to overwhelming tubercular infection. However, no AFB were isolated from sputum, stomach contents, or pleural fluid.

Histoplasmosis comes in many forms from pneumonic to calcific. The skin test was negative. No calcium is described, and there is no history of exposure.

Coccidioidomycosis frequently produces an upper lobe lesion, fan-shaped, radiating from the hilar with involvement of the lymph nodes. Nothing like this is described and the skin test was negative.

Actinomycosis usually involves the lung and pleura with extension to the ribs, in the form of periosteal proliferation. Blastomycosis produces a diffuse pneumonic infiltration. There

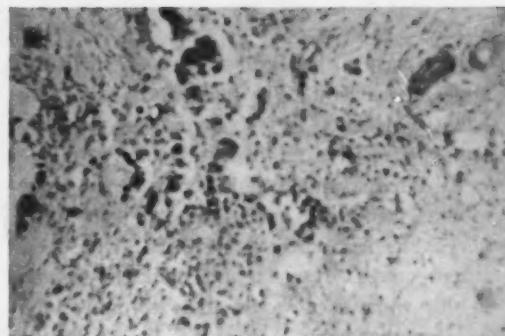


FIGURE 1 Lung tissue replaced by acinar cords of cells. Psammoma bodies on the left (H. and E. x 240).

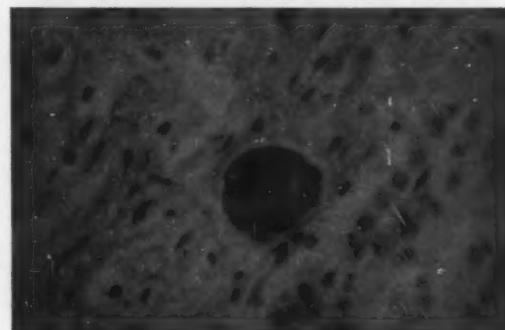


FIGURE 2 Psammoma body (H and E x 480).



FIGURE 3 Invasion of the pleura. The outer surface of the pleura is free of tumor (H and E x 100).

is little in the protocol to suggest any one of the mycotic family.

Lymph

It is hard to think of sarcoid without lymph node involvement. The reversal of A/G ratio and the negative PPD becoming positive are faintly suggestive of this, however.

In summary then, this woman had three months' history of progressive difficulty with her chest; her cardinal symptoms were persistent cough, dyspnea and right chest pain; in this situation I would most certainly look for a malignancy. Metastatic disease to the chest and especially to the pleura must be seriously considered; however careful research of the protocol fails to reveal a primary site. Without lymph node involvement for pneumonic infiltration, bronchogenic carcinoma in this non-smoker seems less likely to me. A mesothelioma, primary tumor of the pleura, might well describe the findings in the pleura but does not explain satisfactorily to me the absence of hemorrhagic pleural fluid nor the gradually enlarging solitary parenchymal nodule.

To my way of thinking, a primary alveolar-cell carcinoma is most likely, with the primary in the nodule described the right upper lobe and secondary metastases to the entire pleura with fixation of the right diaphragm.

Pathology

DR. RUDOLF GARRET: A wedge-shaped piece of firm, white tissue, measuring 1.4 cm in the largest diameter, was received for examination.

The biopsy was taken from the pleura and subpleural tissue.

The pleura was thickened due to proliferation of fibrous tissue. The lung underneath the pleura was replaced by tumor (Fig. 1), consisting of atypical epithelial cells, lining irregular tortuous spaces, or forming solid sheets. The tumor cells were embedded in fibrous stroma.

The nuclei of tumor cells were moderately pleomorphic and hyperchromatic. The cytoplasm of tumor cells was pale eosinophilic, with occasional mucicarmine positive vacuoles. There were occasional psammoma bodies seen (Fig. 2). The pleura was covered by unremarkable adipose tissue and only the innermost part was invaded by tumor (Fig. 3).

The histological diagnosis was alveolar cell carcinoma, synonymous with terminal bronchiolar carcinoma, and/or pulmonary adenomatosis.

This diagnosis is based on histology of the biopsy, assuming that the primary tumor in the ovary or thyroid gland was ruled out.

Malignant mesothelioma of the pleura may reveal similar histological picture; however, the tumor involved the lung tissue underneath the pleura and not the surface of the pleura, as would be expected in a malignant mesothelial tumor.

Psammoma bodies present a not very specific finding, encountered in carcinomas of the ovary, thyroid, alveolar carcinomas of lung, and in papillary mesotheliomas.

Alveolar cell carcinomas of the lung appear to be of multicentric origin. They often mimic inflammatory lesions on x-ray examination and even on gross examination of the lung.

Final Pathological Diagnosis: Alveolar cell carcinoma of lung.



Catheterization of the Male Urethra

Catheterization is a necessary office procedure for a large variety of diseases and diagnostic procedures; it is also one of the operative procedures where the slightest disregard of a step in the technique might cause grave damage.

Anatomy

The understanding of the anatomy of the urethra is the key to the technique of catheterization.

The uretha consists of three parts:

1. *Pars Prostatica*, situated in the pelvis.
2. *Pars Membranosa*, situated in the perineum.
3. *Pars Cavernosa*, situated in the penis.

The upward directed concave curvature of the subpubic curvature is fixed; the downward directed concave curvature of the prepubic curvature can be straightened out by lifting the penis. The pars pendulosa of the penis is freely movable, the pars membranosa is firmly fixed, the other parts are slightly movable. The lumen at the external and internal orifices and at the pars membranosa is narrowed. The lumen at the pars prostatica, the fossa bulbi, and the fossa navicularis is wider (Fig. 1).

Technique

Catheterization should be attempted first with a straight soft Nélaton catheter; if this is unsuccessful then with a soft catheter with a Mercier curve; if this is also unsuccessful the rigid catheter should be tried and finally catheterization with a woven silk catheter should be attempted. The size of the catheter should be 20-22 Charrière; If this appears too thick then a smaller caliber should be tried (Fig. 2).

The patient is placed on his back, the buttocks are elevated by a hard cushion, the legs are spread apart and are somewhat externally rotated, the knees are slightly bent. A urinal or kidney basin is placed between the thighs of the patient. The operator stands at the left side of the patient.

Catheterization with Rubber Catheter

The orifice of the urethra is cleansed with a mild disinfecting solution. The left hand of the operator grasps the penis at the coronary sulcus and elevates it by a slight traction so that it becomes vertical to the long axis of the body. Slight pressure upon the glans with the thumb and index finger causes the orifice to gape. A few drops of a sterile lubricating jelly

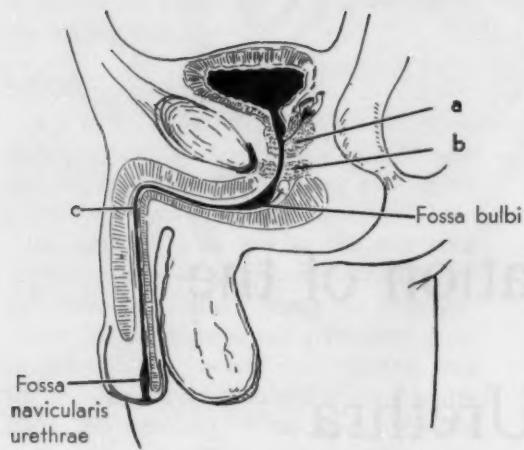


FIGURE 1 Median section of the genito-urinary tract showing the shape and dimension of the lumen in the urethra, the passage way of the catheter.

a. pars prostatica.
b. pars membranosa.
c. pars cavernosa.

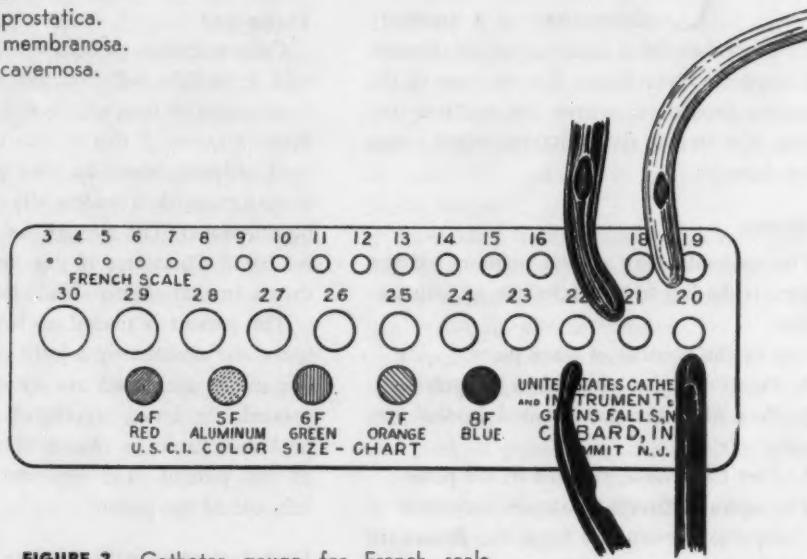


FIGURE 2 Catheter gauge for French scale (Charrière) catheters. (Actual size)

are inserted into the gaping orifice (Fig. 3a).

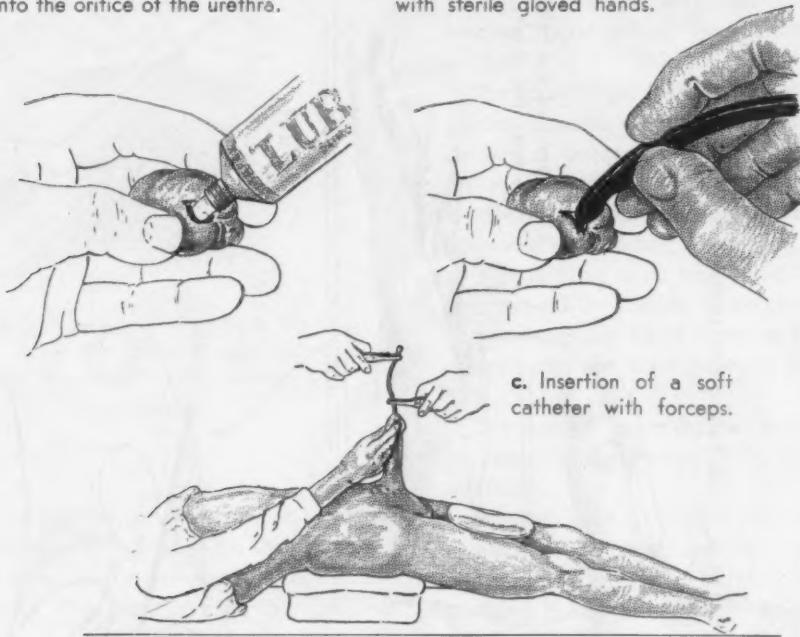
The right hand which is covered with a sterile glove grasps the sterile catheter, upon which has also been placed a few drops of a sterile lubricating jelly, close (about 1½

inches) to its tip and pushes this length of the catheter slowly into the urethra (Fig. 3b). Immediately at its insertion the catheter may encounter a slight resistance caused by the fold of the mucosa at the upper wall of the urethra

FIGURE 3 Method of insertion of a soft catheter.

a. Insertion of lubricating jelly into the orifice of the urethra.

b. Insertion of a soft catheter with sterile gloved hands.



(Guérin's fold), or by the pouch of the fossa navicularis at the lower wall of the urethra. These obstacles can be easily overcome by a slight twisting of the catheter. The further insertion of the catheter is accomplished by successive grasping of the catheter a similar short distance above the urethra and pushing it into the urethra. Make sure the parts of the catheter to be inserted remain sterile and do not lie on contaminated areas during first part of insertion. This same procedure is repeated until the catheter reaches the bladder. The catheter usually glides easily through the cavernous part of the urethra up to the bulbus. As the bulbus an existing pouch of the lower wall of the urethra might offer a resistance to the further gliding of the catheter, as the catheter might push against the blind ending of the pouch instead of entering the narrowed membranous part. If this occurs the obstacle can be overcome by pulling the penis with

more force, by retracting the catheter slightly and by slightly lowering the penis and catheter; then the catheter can be pushed forward by short shoving motions. The patient is requested to take a deep breath to avoid any reflex contraction of the perineal musculature. The appearance of the urine indicates the entrance of the catheter into the bladder.

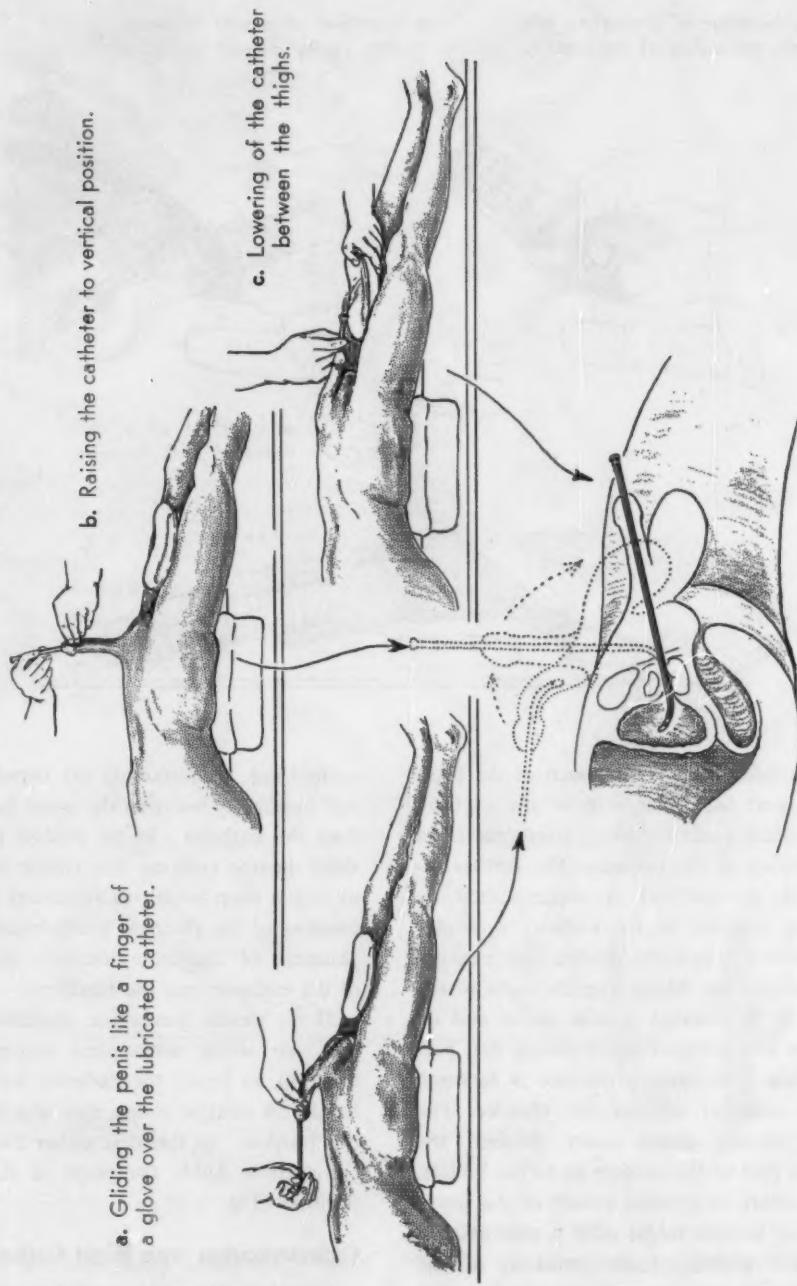
If no sterile gloves are available one can use two sterile anatomical forceps (ribbed forceps) to insert the catheter with unsterile hands. A straight clamp may also be used for this purpose. In this case either the patient or an assistant holds the penis in the required position (Fig. 3c).

Catheterization with Rigid Catheters

Catheterization with rigid (metal) catheters is accomplished in three stages.

1. The right hand of the operator holds the metal catheter at its distal end parallel to

FIGURE 4 The three stages of insertion of a rigid catheter.



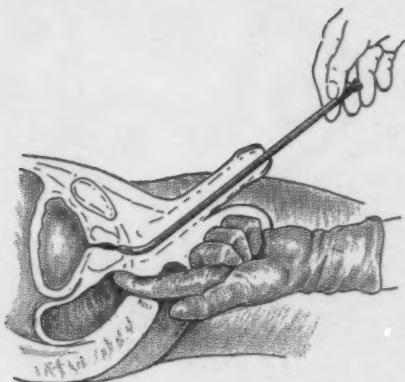


FIGURE 5 The method of pressing the catheter from the perineal side upward to aid its passage into the bladder.

the long axis of the patient's body and in mid-line of the patient's abdomen, so that the curve of the catheter is directed upward and the tip downward. The left hand of the operator grasps the penis at the coronal sulcus and glides the penis over the lubricated catheter as far as it is possible without moving the catheter, which is held in an unchanged position (Fig. 4a).

2. At this point the catheter is past the cavernous part of the urethra and lies at the bulbous urethrae. By very gentle manipulation, the catheter is raised slowly to vertical position but not deviating from its position in the median line. The tip of the catheter is now glided through the membranous part of the urethra (Fig. 4b).

3. The tip of the catheter is now at the prostatic urethra and, by gently pressing with its tip against the anterior wall of the urethra, the catheter is slowly lowered between the thighs, until its axis is parallel with the long axis of the patient's body, with its end pointing distally towards the feet of the patient. By this manipulation, the catheter is passed through

the prostatic urethra and enters the bladder and allows the urine to flow out (Fig. 4c).

The insertion of a metal catheter is accomplished by lever action alone and never by forcible pushing the instrument into the urethra.

The most frequent difficulty encountered in passing a metal catheter occurs when its tip catches in the pouch of the bulbous urethra just as the entrance of the narrow and inelastic membranous urethra. This difficulty can be overcome by retracting the catheter slightly and then proceeding again with slight lever action. One can aid the passing of the catheter at this point by pressing its tip from the perineal side upward with the index finger of the left hand (Fig. 5).

The removal of the catheter is accomplished by reversing the phases of the procedure of insertion.

Semisoft woven catheters are inserted in a similar way as rigid catheters. Rubber and woven catheters should be given special care to avoid deterioration, which makes their use unsafe. The following methods will preserve them for safe use for a prolonged period of time.

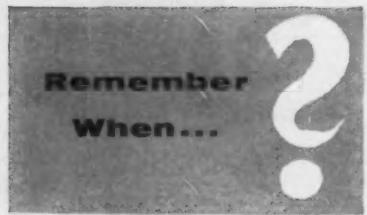
Sterilization

1. Autoclaving for ten minutes at 250 F. with fifteen pounds pressure is the best method.
2. Boiling for five to ten minutes is not an efficient method and should be used only if other methods are unavailable.
3. Cold sterilization should be with solutions which contain no phenols, cresols, or other rubber solvents.

Catheters deteriorate when oversterilized and might crack if bent during sterilization.

Catheters should be kept in a cool dark place away from electrical equipment, fluorescent lights and other devices which might emit ozone. Contact with oils, copper or manganese should be avoided, and one should not permit hot catheters to touch any metal.





**Remember
When...**



Remember when this picture entitled "Doctor dispensing medicine to sick 'shoeshine boy'" could have been taken? . . . Boys wore "straight pants," not knickers, shorts, or "long" pants? . . . Caps such as that on the back of the chair were the vogue? . . . All boys had hooks on their shoes? . . . Doctors really "gave" medicine?

Photo: The Bettman Archive, New York City

EDITORIALS

PERRIN H. LONG, M.D.



THE FATE OF THE "ELDER-CARE" PROGRAM

At the time of this writing (September 1961) it would appear that the King-Anderson Bill which, if enacted, would provide medical care for all individuals of sixty-five years of age or over, as part of the Social Security program, will not be brought to a vote in this session of Congress. Just why this Bill which was so much of a "must" in the platform of the Democrats in 1960 has not been sponsored more actively and energetically by the White House in the last session of Congress, has been puzzling. Congress has held but two hearings on it to date. Whether the failure to concentrate on the King-Anderson Bill is an example of let's do "first things first," or whether it seemed better tactics not to push Chairman Mills (Dem. Ark.) of the House Ways and Means Committee (where such a bill gets under way), and who voted against a comparable bill last year, remains to be seen. Of course, there may be another reason for the backers of this Bill to go easy with it in this session. Next year is election year. With a lobby of about seventeen million elderly voters who are being lined up to push for the enactment of this piece of legislation, congressmen up for re-election, and who have opposed the Bill previously, may well "re-evaluate" the merits of the proposed measure. An election year will certainly help the purposes of the sponsors of this Bill.

We have noted previously (*MEDICAL TIMES*, Vol. 89, No. 2, P. 862, 1961) that a Gallup Poll indicated that a substantial majority of people in all voting age-groups favored the Bill as currently proposed. Pressure groups made up of oldsters such as Emeriti are becoming increasingly active. Former Representative Forand (Dem. R. I.) who is a pioneer in Elder-Care legislation has formed the "National Council of Senior Citizens for Health

Care through Social Security" to lobby for the King-Anderson Bill. The Council's headquarters which have been opened, are proximal to Capitol Hill where ex-Congressman Forand has many friends.

Attacks on the Kerr-Mills Act which was passed in the summer of 1960 are increasing. The Assistant Secretary of HEW has recently testified that but slightly more than ten thousand elderly people received medical attention under the provision of this Act in the first six months of its existence. HEW also has reported that about one-half of the forty-three states which currently offer medical care to old age assistance beneficiaries have done anything to improve their programs for Elder-Care. Then too, the plans, as set up lawfully by many of the states, fall very short of the benefits which are glowingly listed in the Kerr-Mills Act as being eligible for matching funds, and Secretary Ribicoff has consistently pointed out that these differences in benefits offered between the states are "not fair to the elderly." Furthermore, as Senator McNamara has said: "The states are already experiencing difficulty in financing other essential programs. . . . The danger emerges therefore that the economic burden of the medical assistance for the aged program will tend to restrict the scope of benefits and the aged population to be covered, and thus fail to meet the long-range legislative intent of the program." As we pointed out some time ago, and as Colorado, New Mexico and Washington have learned, Elder-Care can be really expensive.

Then to go back to recent polls, Republican Wendall, of New Jersey, is quoted as "expressing astonishment at a 20% return to 60,000 questionnaires mailed out, reports a 62.5% yes vote for the King-Anderson Bill." In a like vein, Republican Representative Schniebel of Pennsylvania reported that his constituents were fifty-nine percent in favor of the King-Anderson Bill.

With all the pressures which are being built up and the fact that next year is election year, it is difficult to see how amendments and modifications of the present Kerr-Mills Act, prob-

ably incorporating some sort of a plan to place Elder-Care under Social Security, can fail to pass unless overwhelming opposition develops. Furthermore, when a leading State Insurance Commissioner, Charles R. Howell, of New Jersey, writes in a letter to the *Wall Street Journal* (August 25, 1961): "Despite the fine progress the insurance industry is making, and despite the fact that I strongly resist the continuing unnecessary encroachment of the Federal Government upon the rights of states, I am not yet convinced that private insurance has an adequate answer to the social needs which our Federal system of Social Security provides and proposes."

We believe that the points we have presented are definitely "straws-in-the-wind" relative to the push which will be made in the next Congress to enact the King-Anderson Bill. Those of us who feel that the proposal is financially unsound, and hence, if enacted, will eventually constitute a fraud on our people, should redouble our efforts to defeat this Bill. We must marshall our forces, get our figures in line, and do everything in our power to convince our representatives in Congress that the King-Anderson Bill is not the answer to the needs of the elderly for medical care. Let's not give up. If we have to go down, let's go down fighting.

EXPERIENCE IS A DEAR SCHOOL

(BUT THE DEPARTMENT OF DEFENSE
DOESN'T EVEN LEARN IN THAT SCHOOL)

One of the major complaints during W.W. I and W.W. II was that the professional complements of Ready Reserve Medical Units, the doctors, dentists, and nurses, were ordered to active duty with their unit, and then did nothing but drill and march, pack and unpack for months and months and months. Historically, the calling to active duty of the Massachusetts General Hospital Unit #6 in W.W. II was an excellent example of this thoughtless and stupid

policy. Following W.W. II, the medical profession was assured on numerous occasions that this would not happen again. In 1948 Secretary Forrestal told your Editor that neither he, nor could he imagine any succeeding Secretary of Defense, would be so thoughtless as to order to active duty scarce professional personnel and then let them cool their heels doing nothing professional.

But it has happened again. Ready Reserve

Medical Units will be ordered to active duty with all of their professional people. This is a waste of scarce professional personnel and is sheer nonsense. Except for the commanding officer and executive officers, the professional complements of Ready Reserve or National Guard Medical Units should not be ordered to duty until the unit is about to be deployed! Mr. McNamara, do you know about this? Do you permit such bad practices?

Harvey B. Matthews, M.D.

After a long illness, Dr. Harvey B. Matthews, of New Canaan, Connecticut, died on September 19, 1961, at the age of 78.

Dr. Matthews, an obstetrician and gynecologist, was a member of the editorial board of the American Journal of Obstetrics and Gynecology and wrote various articles on those subjects. He served as associate editor of MEDICAL TIMES for 25 years.

He was born in Webberville, Texas, and was graduated from the University of Texas. In 1909, he was graduated from the College of Physicians and Surgeons, Columbia University. During most of his career he had practiced in Brooklyn.

At various times, Dr. Matthews was attending physician or consultant at 22 hospitals in the New York, Long Island and Connecticut areas. He had been director of the Department of Obstetrics and Gynecology at Coney Island, Caledonian and Trinity Hospitals, all of Brooklyn.

Since 1915 he had been associated with the Long Island College of Medicine, where he was named Professor Emeritus of Gynecology and Obstetrics in 1950.

Dr. Matthews has served as chairman of the section on obstetrics and gynecology of the American Medical Association and had been a past president of the New York Obstetrical Society.

He was consultant to the Children's Bureau of the United States Department of Labor, the Planned Parenthood Federation of America and the New York City Department of Health.

Surviving are his widow, Emma L.; two sons, Harvey B., Jr., and John G., and six grandchildren.



THE LONG AND SHORT OF IT

From Your Editor's Travels and Reading

ON THE STATE OF OUR ARMY, Part I

The seventh annual meeting of the Association of the United States Army held September 5th to 8th, at the Sheraton-Park Hotel, in Washington, D.C., was interesting from several points of view. First of all, the members and guests of the Association had an opportunity to compare the papers presented at this meeting with those presented at previous meetings insofar as "inside" information was concerned. The general opinion was that as far as the military speakers were concerned, they were under wraps. Secretary of Defense McNamara's G(ag)-Boys in the Pentagon appeared to be in full control. Secondly, all of the top Brass of the Army (Chief of Staff, Commanders of the European, Pacific, Caribbean Theaters and of the Continental U. S. Army, etc.) were present and spoke. Thirdly, representatives of the West German (hard to believe), French, Italian, Thai, Peruvian and Guatemalan armies were present and presented papers. Fourthly, the registration at the meeting was about four thousand, and the subscriptions to the annual George Catlett Marshall dinner (\$12.50) were sold out months in advance. Fifthly, excellent addresses were given by Secretary of State Dean Rusk, Assistant Secretary of Defense Paul H. Nitze, and Secretary of the Army Elvis J. Stahr, Jr. These talks did not show the evidence of blue-pencilling which was suspected or actually

known from what was said or inferred in the presentations of several of the uniformed speakers. Finally, one can say that this annual meeting was very pleasant, because, as always, it really is a homecoming or a family reunion of those, who for one reason or another, have become deeply interested in what we will call the family of the United States Army. We will not discuss what was said in a chronological manner; rather we will take up the remarks of the various speakers by echelons of command, by missions involved, and by geographical areas.

● POLICY TALKS—Obviously, the most important of the talks delivered before the Association was that of Dean Rusk at the George Catlett Marshall dinner on the last day of the meeting. To quote Secretary of State Rusk: "The United States emerged from the second world war at a pinnacle of power never before achieved by any nation. Our productive facilities were incomparable and, alone among the larger industrialized nations, were unscathed by bomb or shell. We had a great army and the mightiest sea and air forces the world had ever seen. These were deployed around the globe on every sea and continent. We had developed a fantastic weapon, and we alone had it.

"One thinks of Lord Acton's thought that 'Power tends to corrupt and absolute power corrupts absolutely.' It has been refuted by

the course pursued by the United States in the last sixteen years.

"It is not a small thing in the history of the world that a nation with supreme, well-nigh unchallengeable, power turned away from the exploitation of that power, from the corrupting policies which power could entail. We committed ourselves wholeheartedly to building a peaceful world order based on the principles which were written into the United Nations Charter.

"We took a leading role in creating the United Nations. I know of no better statement of the enduring purposes of the foreign policy of the American people than Articles 1 and 2 of that Charter.

"Every nation which joined the United Nations joined in solemn commitments to renounce and suppress aggression and to settle disputes by peaceful means. Machinery was established to facilitate peaceful settlements—the Security Council, the General Assembly, the International Court. The members pledged themselves to use not only these bodies but the traditional processes of negotiation, conciliation, mediation, and arbitration.

"When one thinks of that great document, one remembers the hopes that went into its drafting. In the vernacular of the GI, it looked as if 'man almost had it made.'

"We not only abided by the principles of the United Nations and dedicated ourselves to constructing the sort of world envisioned by the Charter. We also moved to dismantle our own military power. In fact, we disarmed unilaterally and precipitously. *By the end of 1946 we had no single Army division and no Air Force group ready for combat.* (Italics ours, Ed.)

"We still had an atomic monopoly. But we proposed to divest ourselves of atomic weapons, too. I was on the General Staff when Hiroshima occurred. I remember a remark of a colleague: 'War has turned upon and devoured itself, for no human purpose can be achieved by war under these conditions.' We as a nation believed that. We presented a plan for the international control of atomic

energy, to assure that it would be used only for the peaceful benefit of all the peoples of the world and to avoid the kind of nuclear arms race which is subjecting the world to terror today. We most earnestly endeavored to get the United Nations to put that plan into effect. Our efforts were frustrated by one member: the Soviet Union . . .

"That declared policy of non-cooperation, plus modern weapons—plus the Soviets' terroristic threats to employ those weapons—gives dramatic content to the words used by Thomas Hobbes in describing the law of the jungle: 'nasty, brutish, and short.'

"Why have these hopes which we are convinced are the hopes of most of mankind, been frustrated? Why have all our efforts borne so little fruit? The central reason is that one government refused to join with the rest in building the kind of world the United Nations Charter envisioned and, instead, embarked upon a course of aggression.

"The Soviet Union contemptuously reneged on its wartime pledges to permit self-determination in Eastern Europe. It supported an aggression against Greece, thinly disguised as a 'civil war.' It tried to intimidate Turkey into yielding concessions which would have jeopardized the independence of Turkey and exposed other nations in the eastern Mediterranean and beyond to aggression.

"Counting on economic chaos as its ally, the Soviet Union sought to extend its dominion into Western Europe. In 1948, in violation of its agreements with the Western Allies, it blockaded Berlin, denounced the quadripartite control machinery for Germany, and set about making the part of Germany which it occupied a political and social segment of the Soviet Union itself. Then came the aggression in Korea. A little later came the ruthless suppression of Hungary.

"One incident after another has made it quite clear that the Soviet Union will not tolerate self-determination by any people over whom it can extend its sway. One incident after another has demonstrated that it is not prepared to work toward a world of law. As

one Soviet representative put it: 'The law is like the tongue of a wagon: it goes in the direction in which it is pointed.' Or, as other representatives have put it: 'The Soviet Union will not submit its interest to decision by anyone else.' Such a policy—and its corollary, the Troika, which would paralyze the Executive functions of the United Nations — torpedoes the possibility of law, of adjudication, of mediation, of peaceful settlement, peaceful adjustment of conflicting interests. . . .

"The months ahead will be critical months and much will turn on the issue of Berlin. President Kennedy has called it 'the great testing place of Western courage and will, a focal point where our solemn commitments, stretching back over the years since 1945, and Soviet ambitions now meet in basic confrontation.' He has called upon our own people and upon our Allies to undertake fresh sacrifices to give the free world the additional strength we shall need to keep the peace or to meet the dangers which might arise . . .

"At the very time he called for greater strength, President Kennedy said, 'We shall always be prepared to discuss international problems with any and all nations that are willing to talk—and listen—with reason . . . If they seek genuine understanding — not concessions of our rights, we shall meet with them. . . . We cannot negotiate with those who say 'what's mine is mine and what's yours is negotiable.'

"If peaceful processes are to succeed, they must be given their chance. This means that unilateral action taken against the vital interests of the free world in West Berlin could only court disaster. There have been threats and implied threats of such action in recent weeks, with particular regard to allied air traffic into Berlin. These threats have been rejected promptly and in the most solemn terms by the Western powers. I spoke earlier of clarity. It is possible for those who do not understand democracy to make a mistake about these matters—by listening only to the voices they wish to hear, by confusing debate with disunity, by reading a desire for peace

as a willingness to yield. These are mistakes which Moscow cannot afford and which mankind cannot afford."

By the time these words are published, it is likely that the answer, if not in, will be on its way. Then we will know whether hindsight or foresight is the better.

The second major speaker at the policy level, Assistant Secretary of Defense, Paul H. Nitze, spoke with remarkable precision, clarity and seriousness relative to our present position in this most dangerous period in our history. He did not mince his words.

"In recent weeks we have seen a series of decisions affecting the strengthening of the United States Army. I believe we will see further such decisions in coming weeks. It is appropriate, therefore . . . to say a few words about the world situation which has made and is making these decisions necessary.

"In the first place it is clear for all to see that the current crisis is Mr. Krushchev's crisis. He has taken the initiative. He has chosen the timing. He has made the demands. He has issued the threats. He has specified the deadlines. He could call off the crisis if he wished to. He is acting in the classic role of the aggressor.

"The crisis focuses on Berlin, an enclave with its access routes running through Soviet-controlled territory. But the current crisis is broader than Berlin. It involves a total confrontation of Soviet Bloc objectives and those of the non-Communist world.

"The Soviet leaders style themselves as 'peace lovers,' the Socialist camp, they say, desires only peace. Let us analyze what this really means. Secretary Rusk has already pointed out the extraordinary perversion of language which allows totalitarian regimes to style themselves as 'democracies' and to label Western measures for 'defense' as 'aggression.' In their terms, the West should show its dedication to the cause of peace by acquiescing to all Soviet demands, even the most outrageous, thus helping to prove the Communist dogma that the triumph of what they call 'Socialism' will be achieved without war. . . . As Clause-

witz put it very succinctly years ago, the aggressor is always peace-loving, for he wants to enter the territory of his victim unopposed. Clausewitz said war exists for the benefit of the defender; it comes about only if the defender wishes to fight for his vital interests rather than surrender them.

"Let us turn now to the specific case of Berlin. The West's objectives are simple and straightforward: we are committed to preserve the freedom of the people of West Berlin and the viability of the city itself, which means there must be the right of free access to Berlin. To guarantee that right the continued garrisoning of the city by forces of the three Western powers is necessary. The Soviet prime objectives are to eliminate the window on Eastern Europe represented by Berlin — which they have in part accomplished by sealing off the Eastern portion of the city—and to compel at least a de facto recognition of the East German state and its present boundaries . . .

"Speaking personally, I am convinced that there is also a much broader Communist objective involved, of which Berlin is merely a proving ground. This is to impose on the West and on the U.S. by the application of threats of force, and terror tactics, a psychological defeat by purporting to demonstrate our impotence in the face of the much advertised Soviet power . . .

"The Soviet decision to resume nuclear testing is clearly a part of this scheme of intimidation. The timing of the announcement was, in effect, a calculated thumbing of the nose at the convocation of nonaligned nations in Belgrade. It is said, in essence, 'we are strong, we are armed, we shall do as we please'—in direct opposition to the words of our own Declaration of Independence, they flaunt an '*indecent, disregard*' for the opinions of mankind.

"The neutral nations believe that the Soviet attitude is fixed and unchangeable—an impression the Soviets have done their best to confirm—and that, therefore, it is the West which must draw back and, if necessary, appease the Soviet Union if World War III is

to be avoided . . . But the Communists should understand that though democracies have great patience and forbearance, there eventually comes a point where one more straw will break the camel's back of that forbearance. Any interference with our essential rights in Berlin must be viewed by us as the straw that breaks the camel's back . . .

"In meeting the Berlin — or other Communist challenges, general nuclear war should not be our only recourse. But let me be very clear: We must first have nuclear striking power before our other capacities to meet these challenges can be effective. Thus, one of the first tasks to which this Administration addressed itself was the strengthening of our nuclear deterrent capabilities both for the immediate future and the longer range future.

"To achieve this the United States took a series of measures. *First*, we moved to improve our missile deterrent by emphasizing hidden, moving or invulnerable delivery systems. We accelerated the program for building of the Polaris submarine force. We expanded the development of the solid-fuel Minuteman. We are developing improved air-to-ground missiles, such as the Skybolt.

"*Second*, to protect our existing bomber forces for their nuclear deterrent role, we have increased our ground and airborne alert capacities and are working to install bomb alarm detectors and signals at key warning and communications points and all SAC bases.

"*Third*, we are constructing and improving our continental defense and warning systems such as BMEWS and the satellite-borne Midas system to add precious additional minutes to our warning of an attack.

"*Fourth*, we are examining with care the problem — organizational and technical — of command and control of nuclear weapons to assure that the decision to use such weapons can be responsibly exercised under the authority of the President and to minimize the risks of triggering war by accident or miscalculation.

"*Fifth*, as an insurance policy to mitigate devastation of our population should there be

a nuclear war, we are seriously undertaking a program of civilian defense.

"Finally, in spite of the Soviet resumption of nuclear tests, we shall still strongly support sensible proposals for achievement of responsible arms control.

". . . For this reason, the second goal of the Administration is to strengthen and expand the intermediate options in terms of military force. In these intermediate options the U.S. Army plays a vital role. Our ability to respond to challenges with increased levels of force short of all-out war has been neglected in the past. We are doing our best to make the necessary adjustments.

". . . These include: expanding research on nonnuclear weapons; procurement of new, longer-range, modern airlift aircraft and more sea-lift capacities; modification of tactical fighters so they can better handle conventionally armed ordnance items and be better adapted for landing and take-off in different types of terrain; and modest increases in personnel.

". . . Ships and planes with tactical air power, air-lift, sea-lift and antisubmarine welfare capabilities are being retained in service or reactivated, and the deactivation of certain B47 bombers is being deferred. Draft calls are being substantially increased. We are filling out present Army divisions and making certain increases in the Navy and Air Force, and Secretary McNamara recently announced certain call-ups of the Reserves, reflecting our concern for improvement in our readiness for combat in event of further deterioration of the Berlin situation. I expect that you will see more measures to improve this readiness in the very near future . . . They are part of both a short-term and a long-term effort to enhance the capacity of the United States and of its allies to fight effectively at the non-nuclear level while concurrently retaining and improving a strong and ready nuclear deterrent. . . .

"In summary, *first*, we have great nuclear capabilities. We are not particularly impressed with the Soviet threat to develop nuclear

weapons in the 100-megaton range. We are not interested in arms of a terroristic nature, but rather our nuclear capability is tailored to specific tasks. We have a tremendous variety of warheads which gives us the flexibility we require to conduct nuclear actions from the level of large-scale destruction down to mere demolition work. I could not, of course, give specific numbers, but I can say that the number of nuclear delivery vehicles of all types which the U. S. possesses provides the flexibility for virtually all modes and levels of warfare.

"Second, at the same time, we have a growing nonnuclear capability with a large growth potential. The economic base represented by the U. S. and our Western European allies far outdistances that of the Communist Bloc. But to apply it to the development of enough conventional military power to offset fully the Communist conventional power will require determination, will and sacrifice. I can only assure you that as these are called for by developments, the Administration will ask for them in the full confidence that the American people will respond as they always have when their leaders lay great issues before them, and that our allies will do their share.

"Today's Berlin crisis focuses the basic issues as to the course of the next hundred or so years of the world's history. We now appear to be at a key moment of crisis. The next ninety days and beyond may well see the test which will decide whether that future history will be one of richness and diversity in the world or whether it will simply be one of bleak conformity to a world-wide totalitarianism. Even successfully surmounting the challenges of the next ninety days or even the next year will not solve all our problems. The basic Communist challenge will continue. We are going to have to meet it on all fronts—political, economic, military and psychological—if freedom is not to perish from the face of the earth. On the military front, our effectiveness may well depend on the number of options which we possess and with which we can respond flexibly to a wide range of possible provocations.

tions. In large measure, it is the ground forces of the U. S. Army which will give us this military flexibility. . . ."

Here again our policy towards Communist meddling is clearly outlined, and with this knowledge of the thinking of the Administration in relation to current strategy, one should be able to predict what the reactions of this country will be to various Soviet actions.

● THE GLOBAL FRONTIERS OF THE ARMY

—The theme of the 1961 meeting of the Association of the United States Army was the "Army's Global Frontiers." The current Secretary of the Army, Elvis J. Stahr, Jr., is a Rhodes Scholar, a student of Chinese, a lawyer by profession, who came to his position as Secretary from the presidency of the University of West Virginia. During World War II he rose from Second Lieutenant, Infantry, to Colonel, Infantry. He is an excellent speaker and gives his auditors the feeling that he knows what he is talking about and that he is entirely sincere about what he is saying. There is none of the attitude of the politician about him. He spoke of the fact that no one had "gotten around to writing a job description for the Secretary of the Army," but that he would tell how he proposed to discharge his obligations. He stated flatly that "To back up our sincere desire for peace, this Nation has developed the strongest deterrent force in history, composed of the powerful and ready retaliatory air and missile forces of the Air Force and Navy." But these he said are not enough "for the threat is not limited to actions which would call for that kind of response."

He pointed out that our Army has the highest type of personnel in history. It is alert, well-trained and morale is high. National Guard and Reserve units are at their highest peaks of peacetime readiness. Our military forces are supported by an unmatched industrial and social economy, and are served by a global transportation system second to none. We can support combat anywhere in the world. However, there are some drab spots in the

military picture, especially as far as the Army is concerned. Due to past policies, many regular units are not up to strength, and, as a result of the concept of "massive retaliation," Army supply levels were permitted to fall "dangerously low." This, coupled with the fact that "Budgetary provisions for procurement of both new and replacement items were inadequate for a modern Army with worldwide responsibilities" resulted in a definite military weakness. In the Secretary's words: "the Army has been under-manned, under-equipped and under-used."

"This trend toward 'underplay' of Army potentialities," he was glad to say, "has been halted." The President has asked for and received from Congress the necessary authorization to build a strong Army, ready for combat anywhere in the world. Within months we will have eighteen combat-ready divisions; a new Special Forces unit, specifically trained for counter-guerrilla and other forms of "sub-limited" warfare, has been organized, and the overall Special Service Forces have been doubled. New and replacement material is on order or in production. Fire-power, mobility and communications are being "beefed-up."

Now in the course of all of this, the Secretary pointed out that he has not been handed a signed blank check. He plans "to squeeze the most out of every dollar spent." "This money," he said, "must be spent with imagination, discrimination, and good old-fashioned cold calculation." Maximal utilization of manpower and materiel will be his aim.

Secretary Stahr also called on all to develop an imaginative approach to the development of weaponry. No more should we be guided by the philosophy that "What goes up, must come down" because, as he pointed out, now "If you throw it hard enough, it won't come down at all." "We must eschew the conservative approach," he said, and get completely new ideas and concepts. These can set our opponents back for years.

In concluding, the Secretary stated he would like to give his views on what his duties and obligations are. He said:

"I think I can express this by drawing an analogy. The Secretary of the Army is somewhat like a quarterback on a football team—but not one of the T-formation specialists you see in pro football today—not one of those pass-throwing crowd-thrillers who look to the bench for the cue for each play. He is more like the kind of quarterback most of you remember from the Thirties who, having absorbed the instruction and strategy of the coaching staff . . . having worked every day of the season to learn the strengths, weaknesses, and assignments of each man on his team . . . having learned to watch for signs of weakness in his opponents—went out on the field on Saturdays and called signals the best he knew how. And, after calling each play he turned into a blocking back, running interference for the man with the ball.

"I expect to call the signals and run interference for Army ball carriers. I'll take my instructions from the coaching staff—in my case the President and the Secretary of Defense—as any good quarterback would, and I'll call the signals which set up the kind of defense or offense I think they want. At that point I'll start running interference.

"The Honorable Henry L. Stimson, who served with great distinction in two separate assignments as Secretary of War, must have had a similar thought in mind when he spoke of the civilian Secretary as having a 'dual function'. 'As a responsible public official', he wrote, 'it is his duty to insure that the Army serves the broad public interest; as the Army's chief it is his duty to act as the defender of the Army against its enemies and detractors.'

"Although I agree with Mr. Stimson in principle, I don't honestly believe the Army has any real enemies among our own citizens—but ignorance, misunderstanding, and misapprehension sometimes do cause it to have detractors. If the Army will—and I intend to help it in every way I can—represent itself to executive and congressional leaders as a sincere and honest team player . . . if it will go regularly to the people with its true story . . . if it will turn its own eyes inward for honest

self-analysis, and self-correction when needed, I think it will find it has a clear road ahead and nothing to worry about except the soldier's venerable task of marching on."

In his talk, General George H. Decker, the Chief of Staff of the Army, emphasized the point that "the Army believes our defense should be based on a *balance* of nuclear and conventional weapons and a balance of land, sea, and air forces . . . The military threat is across the board . . . to neglect conventional aims is to invite aggression by conventional forces . . . to over build conventional forces at the expense of an adequate nuclear deterrent is to invite nuclear blackmail." He pointed out that to make the most of modern combat potentials, the Army is going to re-organize its divisions ("ROAD 1965") to increase protected mobility for example, and that to bolster our forces in Europe each infantry division will soon be furnished one thousand additional men to improve their mechanized strength. We might add here that the "ROAD 1965" concept envisages the re-organization of the battle groups of the "Pentomic" division into brigades.

Furthermore, General Decker pointed out that "For modernization in Fiscal Year 1962, the Army is authorized 2.532 billion dollars for weapons, ammunition, and equipment, as compared to the 1.495 billion dollars authorized for this purpose in Fiscal Year 1961. The fiscal '61 authorization allowed for the replacement of depleted and wornout stocks, but for little in the way of overall modernization of the then 875,000-man Army. The new authorization permits us to meet many of our critical needs in modernizing the expanded Army, particularly the combat vehicle, aircraft, and electronics and communications fields. By way of example, we will be able to procure some sizable quantities of the modern M-113 armored personnel carrier, the modern T-114 full tracked, command and reconnaissance vehicle, and the new M-151 one-quarter ton truck.

"I shall not go into details of the advances in design in these vehicles for I believe that

this audience is familiar with them. The M-113 is lightweight, amphibious, and air transportable. It will be the basic battlefield personnel carrier of the Army. The full-tracked T-114 is the first modern command and reconnaissance vehicle that we have had since World War II; it represents a great advance over its predecessor.

"In the field of Army aviation, the largest increase in numbers will be in helicopters of the light observation type. We will also be significantly stronger in the MOHAWK combat surveillance, and in the CARIBOU transport fixed-wing aircraft. In the electronics and communications field, we will obtain several thousand of the modern VRC-12 radio, which will be the standard field set of the Army. The VRC-12 represents a significant advance over the present AN/GRC 3-8 series, being transistorized, lighter in weight, longer range, and having an increased number of channels.

"All of these measures, both in manpower and modernization — and the others to be implemented — have two characteristics in common: each is essential to the security of America, and each will require a price to be paid by the American people.

The word "sacrifice" is sometimes used to describe the price of national defense, but it is difficult to see how the defense of one's country, home, and family can be spoken of entirely in terms of sacrifice. The outright price

of defense—in dollars and in national effort—is tremendous indeed.

"No better answer can be given as to why such a price must be paid, than by paralleling the reply of Sir Winston Churchill to the question as to what his country was fighting for in World War II. 'Those who ask what we are fighting for,' Churchill said, 'would soon find out if we stopped.' In like vein, I can say that those who ask what the return is on the huge cost of a modern Army may well find out if we fail to maintain that Army. We can pray that this cost stops at money and effort; we can be certain that the expenditure of money and effort now is the best possibility of forestalling the necessity of sacrificing lives later.

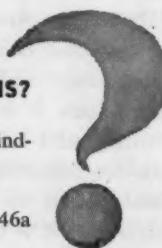
"The dollar price of national defense is borne, to a degree, by all citizens. But the other great price of defense—that of actively serving in the Armed Forces—cannot be borne evenly. Clearly, a disproportionate weight in the present defense program will be carried by the men whose civil careers are interrupted by active service, and by their families. I can say, however, with the assurance of having heard much testimony on the subject, that there are few veterans who are not proud of the share of the Nation's defense that they have carried personally. I have never known a man to be proud of *not* having fulfilled his duty to his country."

(To Be Concluded Next Month)

WHAT'S YOUR EKG DIAGNOSIS?

Read the EKG and compare your findings with those of a top specialist.

SEE PAGE 46a



Should Your Wife Work in Your Office?

In the beginning practice, a wife can make a financial contribution by working in her husband's office. But as the practice expands, steeply graduated taxes cut sharply into the economic benefits to be derived from such employment.



HAROLD J. ASHE
Beaumont, California

In a substantial number of cases, wives of physicians are gainfully employed in the practice as office assistants. Sometimes this is because a physician's wife prefers to be so engaged. More often, it may be motivated by economic considerations.

A physician's wife, like other wives, may be concerned with mounting household bills, heavy income taxes and the difficulty of providing for the future out of family earnings.

Employment of a wife in her husband's office may start as a temporary expedient but become a permanent arrangement. A wife may originally take on such office duties to help her husband during the first months or years when he is struggling to establish his practice. During this period, the salary saving which she effects through her services may be substantial. The small net take-home earnings of the practice may be greatly enhanced.

Unfortunately, as the practice is built up and as professional net earnings mount, the wife's financial contribution may become less significant. During the first few years, net earnings of the practice, before income tax, may be increased by the larger part of the

saving in salary her personal services represent. Spendable income may be increased by about that amount.

As the practice matures, however, the net financial contribution of the wife sharply declines. The financial gap widens between what her services are worth, in terms of salary saved, and the real additional take-home earnings that result.

"I don't know what we'd do if I didn't work in the office," maintains the wife of one young physician. She, like many other physicians' wives, believes the salary she saves her husband is added in its entirety to the family income. Yet, each year, a smaller and smaller part of this saving is available for normal, ordinary family needs.

Reality vs. Illusion

When a wife works in her husband's office, both are disposed to assume the net gain by such a working partnership is represented fully by the salary saved when the wife displaces a salaried assistant. Nothing could be further from the facts of such gainful employment.

Steeply graduated income tax rates make

the wife's contribution to the practice less and less significant as her husband climbs into higher and higher tax brackets.

During the first years of struggle to get established, a wife may willingly carry a double burden. She may work in the office and then put in another shift in the home as housewife. This is a pace she cannot long maintain.

Eventually, absence of the wife from the home during office hours must result in sharply increased household and personal bills. The same income tax rates which cut into her husband's take-home earnings, without her services, attack her contribution to the practice as well. Often, her personal services, though eliminating a salary as a cost of doing business, throw her husband into a higher tax bracket. The direct costs incident to working make further inroads into the theoretical savings she effects for the practice.

Even under ideal conditions, the wife of a physician may not be able to retain for ordinary family needs or investments more than 40 or 50 percent of the value of her services to the practice. In extreme cases, eight hours of work in an office may result in only a negligible net gain.

Small Contribution

"Even though I've gone back to work in the office, we don't seem to be any better off than before," bemoaned the wife of one physician. With a lucrative practice, she and her husband had hoped that her services would underwrite a larger investment program. It did not.

This writer sat down with her and her husband and did some quick figuring. The result: Irrefutable evidence that her *net* contribution was less than \$10 a week. This was in the face of the fact that she had reduced her husband's payroll by \$70 a week by replacing a salaried assistant. This saving increased the net taxable income of the practice by \$70 weekly.

All outlays due to her employment in the practice could not be traced with exactness. There was a suspicion that even this \$10 was not really available for investments. The

physician and his wife had the dubious distinction of increasing the net earnings of the practice substantially without, however, bettering themselves financially. They paid a higher income tax.

A frank discussion revealed the following discouraging circumstances surrounding the wife's employment in the practice:

- A housekeeper was employed to care for the home and two small children.
- The housekeeper was a poor manager and bills increased sharply for household expenses.
- There was some expense boarding the housekeeper.
- On the housekeeper's day off, the family dined out at considerable additional expense, sparing the wife extra home work.
- The wife's employment resulted in some additional expenses which were directly traceable to that fact.
- Every dollar of additional net income created by the wife's services was subject to income tax, and at the highest bracket rate applicable.

Conservative Example

To illustrate how the gross value of a wife's services to a practice are whittled down, let's consider a less extreme case. In this hypothetical case, every factor is weighted heavily in favor of such employment. The wife has no children. She tries to do most of her own housework. She has a cleaning woman come in once a week. All breakfasts and dinners are at home because the wife is determined her value to the practice and her contribution to the family income shall not be dissipated. Yet, despite her vigilance, she cannot escape certain consequences of employment in the office. Here they are:

Gross monthly salary saving	\$300.00
Expenses traceable to or increased by the wife being gainfully employed:	
Cleaning woman 4½ times a month	43.33
Extra lunch expense above that of eating at home	12.00
Transportation to and from home,	

due to husband and wife having different hours	12.00
Miscellaneous job expenses	6.00
Income tax, 30% bracket	90.00

Total expense and tax	163.33
Net gain traceable to office employment	136.67

The foregoing example presupposes that the wife's salary savings available to the practice throws the taxable net income from the practice and other income sources into the 30 percent tax bracket. If, however, the wife's salary saving for the practice pushes taxable net income into an even higher tax bracket, the net salary saving will be even less.

Wholly Taxable

A fact often overlooked in connection with a wife working in her husband's practice is this: All of the additional net profit of the practice that is due to the wife's services is wholly subject to income tax. The costs, however, to the physician and his wife which make her personal services available to the practice, are not tax deductible. These are personal expenses. For example, on the same day the couple sustain a personal expense of, say, \$10 for a cleaning woman, the gross value of the wife's services to the practice may be as little as \$12 or \$14. After income tax, the net value may be \$9.60 or \$10.20, assuming a 30 percent tax bracket. This barely offsets the cost of the cleaning woman.

Moreover, and over a long period of time, the personal expenses incident to a wife's

employment in a practice are bound to rise, even if this goes unnoticed. This further reduces the real value of her services. Starting out bravely to carry a double load, both at home and in the office, the treadmill of drudgery gradually breaks down the wife's high resolution. Little by little more and more household services are farmed out to commercial companies and individuals. This may easily reach a point where a wife's salary contribution to the practice becomes merely an offset to the additional expenses incurred by reason of her absence from the home. Yet she must still carry many of the burdens and responsibilities of a homemaker, in fact.

This discussion is not intended as a defense of that old chestnut about "a wife's place is in the home." Whether a wife elects to be gainfully occupied in her husband's practice is a strictly personal matter and one which only she and her husband are able to intelligently resolve. A good many wives may prefer to work outside the home. They may do so without giving any thought to the economic implications of such employment. They may be happier for doing so.

If, however, financial considerations are a primary factor in office employment, it may be profitable for both a physician and his wife to take another hard look at the realities of the arrangement. On analysis it may be found to be less financially rewarding than had been assumed to be the case. Certainly as a practice becomes more lucrative, there may be less and less economic benefit from such employment.

P.O. Drawer 307



WHAT'S YOUR VERDICT?

In this issue and every issue, *Medical Times* presents authentic medico-legal cases and their interesting court decisions. Test your medical magistracy.

PAGE 58a



To provide a measure of protection for your family in addition to insurance and savings, the author suggests mutual funds as a . . .

Worry-Free Investment for the Doctor

JOSEPH ARKIN, C.P.A.

The doctor of medicine in private practice, unlike other professional groups, is not usually covered by social security or other pension plans. If he is to have any old-age security and protection for his family, it's up to him to provide it. This generally calls for some form of investing of surplus funds.

With a day crowded with seeing patients, visiting the hospital, reading medical journals, and completing health insurance forms, does the busy practitioner find time to select and supervise investments? Usually the answer is, no. And for this reason, many professional men turn to a "supervised" investment through mutual fund shares.

A mutual fund represents the money set aside by thousands of individuals and pooled in one large investment fund. Professional investment managers are employed to select and diversify investments among a select group or a broad cross section of companies and to keep these investments under continuous supervision. The net income of the fund is paid to the shareholders quarterly.

Through a mutual fund, your dollars are used to buy shares of many different individual com-

panies, usually in a wide variety of industries. Spreading investment ownership among many securities is a time-tested investment principle to reduce risk and to increase the stability of investment return.

Trained Supervision

Your investment interests receive the judgment of men trained in the analysis and selection of investment values. Each security owned by a mutual fund is carefully chosen and continuously checked, as though the management organization were working for you individually. There is day-to-day supervision; widespread investigation of securities' values through field trips to all parts of the country; contact with men high in the ranks of the managements of leading corporations; thorough analysis of up-to-date economic and statistical information—all being the ingredients of successful management which you obtain through the ownership of shares of leading mutual funds.

The dividends paid to shareholders are not guaranteed, but vary from year to year, depending on the fund's earnings.

However, since the income of the mutual

fund comes from a large group of securities, continuity of dividend payments rests on a broader base than if income came from only a few securities.

Marketability

Mutual fund shares enjoy a ready market; the fund stands ready under normal circumstances to redeem your shares for cash at a price based on the market value of its investments at the time of the transaction. The fund's prospectus spells out all the conditions of redemption.

Mutual fund shareholders do not have to cope with safekeeping, bookkeeping and supervisory problems. All cash and securities are held in custody by a bank or trust company and detail work ordinarily done by an individual investor is done by the fund. At the end of the year the investor is provided information for his tax return regarding the taxability of the dividends received.

Estate Settlement

The ease of valuation and liquidation simplifies settlement of estates. One transfer agent is dealt with. But more important, mutual funds provide continuing investment supervision while an estate is being settled, as well as continuity of professional management for the surviving members of the investor's family if they elect to retain the shares.

Each investor's needs and purposes are different and for that reason there are many different types of funds. Some deal only in common stocks, others deal in bonds, while others

mix a little of each. In any event the fund's management selects securities for purchase according to the investment objectives of the fund.

Assets

Mutual fund shares are expected to total \$20 billion dollars in value by the end of 1960, with four million shareholders. Compare this with the 1940 totals of \$448 million in assets and 296,000 shareholders.

Ownership of mutual fund shares is not limited to individuals. Pension trusts, colleges, fraternities, insurance companies, banks, business corporations, and hospitals are among those finding it prudent to make such investments.

Future

The past is no guarantee for the future but the doctor should keep in mind that the past decade has seen a continuing decline in the purchasing power of the dollar. Investing in mutual fund shares has been a partial hedge—through American corporations — against this inflation.

A certain amount of one's funds are kept in insurance or in the bank. But these are *fixed* dollars, losing purchasing power each year.

A talk with a representative of a firm licensed by the Federal Securities and Exchange Commission and the National Association of Securities Dealers to sell funds will reveal various methods of investing. It will also help you select a fund best suited to your needs and objectives.





Roosevelt Hospital

NEW
YORK
CITY

*Founded in 1869, this hospital
serves as a round-the-clock
health center for New York
City's midtown community.*



Roosevelt Hospital, situated in the heart of Manhattan, serves a community of 400,000 residents and 1,000,000 others who move in and out of New York City each day to work, to shop or to play. It is Manhattan's oldest, nonprofit, voluntary hospital still operating under its original name and on its original site.

Founded in the gaslight era by James H. Roosevelt, the hospital came into existence in 1869, the same year Sir Joseph Lister ushered in the era of antiseptic surgery. Ulysses S. Grant was inaugurated President of the United States that year and New York City's population totaled but a mere 900,000 persons.

During its first year of operation, Roosevelt admitted 730 patients. Last year, the hospital's 90th anniversary, 10,778 patients were admitted to the 452 acute-bed general hospital which covers an entire city block, bounded on the east and west by Ninth and Tenth Avenues and on the north and south by 58th and 59th Streets on New York's changing West Side.

The changes are continuing. The Garrard Winston Memorial Building, now under construction, is expected to be completed in 1962 at a cost of \$10 million.

Affiliated with The College of Physicians and Surgeons at Columbia University, Roosevelt's teaching program began in 1871 with 12 attending doctors and one house doctor. Today the hospital has 76 house officers and 134 attendings.

Roosevelt's medical and surgical "alumni" include, Dr. Charles McBurney, internationally famed for his surgery on appendicitis and on the common bile duct; Dr. William S. Halsted, whose principles of block and spinal anesthesia have been credited as among the most important original contributions to surgery ever made by an American; Dr. Evan Morton Evans, one of the most brilliant and gifted diagnosticians and teachers, and Dr. James Ewing, who received world-wide recognition as the foremost authority on the pathology of tumors. These Roosevelt men left a heritage of service to the

patients they treated and to the interns and residents they taught.

Roosevelt Hospital graduates have served in almost all 50 states and most foreign countries.

Internships

Mixed internships are available at Roosevelt. The hospital accepts for medical and surgical intern appointments only those doctors who are registered participants in the National Intern Matching Program.

Today there are eight medical internships; appointments are made for one year. The interns in medicine and surgery continue for an additional year as assistant residents.

In addition to the patients assigned to him, the intern routinely sees all patients on his service. He is expected to attend the conferences and seminars arranged for his service, and to take part in all the attending and teaching rounds and in the clinics of the outpatient service to which he is assigned.

Roosevelt Hospital offers residencies in allergy, dermatology, gynecology, hand surgery, medicine, otolaryngology, pathology, pediatrics, psychiatry, radiology, surgery and urology. Established programs of resident instruction vary according to the division and specialty.

A unique service offered by Roosevelt is the Institute of Allergy, founded by the late

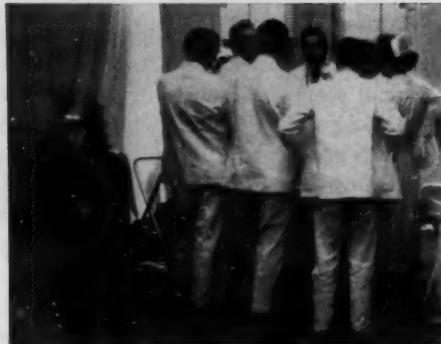
STIPENDS

Interns receive \$1600 a year. Salaries for residents are predicated upon the number of previous years of American Training or its Canadian or English equivalent. Residents with one previous year receive \$1900; with two previous years, \$2300; with three previous years, \$2800; and with four previous years, \$3300.

Members of the house staff not living in the hospital's residence hall receive \$500, in addition to the above stipends.



Photo taken at Roosevelt in 1900 shows Dr. Charles McBurney, the famous surgeon, performing an operation.



Doctors discuss an interesting ward case during rounds.



Emergency duty. More than 40,000 patients are treated here each year.



Daily radiology conferences are open to all staff doctors.

Drs. Robert A. Cooke and Albert Vander Veer, and established here in 1932. The hospital offers a one-year residency in allergy which satisfies the requirements for certification by the subspecialty Board of Allergy of the American Board of Internal Medicine and the American Board of Pediatrics.

Dermatology

The Hospital offers a one-year residency in dermatology which satisfies one year of the three years of training required for certification by the American Board of Dermatology and Syphilology.

Gynecology

The hospital offers a two-year residency in gynecology, which satisfies the hospital training requirements for certification by the American Board of Obstetrics and Gynecology. There is a well-equipped cytopathology laboratory in the Department of Laboratories, where some 5,000 tests are performed annually and which offers an opportunity for the study of malignant diseases.

The hospital offers a six-month residency in hand surgery to doctors who have completed their training in general, plastic, or orthopedic surgery. This residency is under the general direction of the Surgical Service. The resident, concerned with secondary surgical reconstruction of congenital and acquired deformities of the hand and forearm, assists at the 325 major surgical procedures performed each year and performs a limited number of operations under supervision. Special attention is given to operative teaching; lectures are given on the fundamental principles of anatomy.

Medicine

The hospital offers a four-year program in internal medicine consisting of a one-year mixed internship and a three-year residency which satisfies the hospital training requirements for certification by the American Board of Internal Medicine.

In addition to their assignments to the medical, surgical and pediatric services, the

LIBRARY FACILITIES

The hospital operates a library which is open at all times and contains reference material on all medical subjects. Through its library committee, the attending staff regularly purchases new volumes and journal subscriptions. The library has as well, an unusual collection of books on the history of medicine and an excellent collection on tropical medicine from the estate of the late Dr. Thomas T. Mackie.

medical residents are assigned to the Department of Electrocardiography where they receive valuable experience in the interpretation of EKG's and BMR's.

The Medical Service is composed of the first and second divisions, with each division having its chief, attending and resident staff. As a community hospital, major emphasis is placed on the teaching of clinical medicine.

The clinical teaching schedule includes the monthly general staff conference, clinical pathological conference, and tumor conference; weekly instruction periods for residents and medical students; daily radiology conferences, and daily instruction in the clinics. The two chiefs of service conduct formal weekly grand rounds at which problem patients are presented to the entire medical staff.

Otolaryngology

A three-year residency in otolaryngology is offered which satisfies the training requirements for certification by the American Board of Otolaryngology. This service offers highly developed teaching and surgical facilities supervised by a large attending staff.

Pathology

Roosevelt offers a two-year residency in pathologic anatomy which is approved by the American Board of Pathology. A request for approval of a four-year training program in anatomical and clinical pathology has just been



Patients await appointments in the outpatient department at Roosevelt. An average of 94,000 patient visits are recorded annually at the hospital's 40 clinics.



In 1959 almost 6000 operations were performed.

made. The teaching program is under the supervision of three full time pathologists, and covers the various fields in anatomical pathology such as autopsy, surgical pathology, frozen section, exfoliative cytology, and the study of bone marrow.

There are approximately 400 deaths annually, with an autopsy rate of 58 percent of ward deaths and 43 percent of private patient deaths. The cytopathology laboratory offers opportunities for the study of early diagnosis of malignant disease through some 5,000 tests performed annually.

Microscopic surgical pathology is conducted each morning by an attending pathologist, with the pathology house staff present.

Pediatrics

The hospital offers a two-year residency in pediatrics, which satisfies the hospital training requirements for certification by the American Board of Pediatrics.

There are formal teaching sessions several times weekly, and daily instructive bedside rounds. The chief of service conducts weekly teaching rounds. At the monthly pediatric conference, outstanding guest speakers are invited. A well-organized course in pediatric cardiology is given throughout the year and experience in pediatric allergy is offered through the Institute of Allergy. There is also close association with the active pediatric psychiatric unit, and pediatric x-ray conferences are held weekly with an experienced pediatric radiologist conducting teaching conferences for the pediatric and radiological house staffs. There is an active out-patient department that has an annual average of 6,000 visits.

Psychiatry

A one-year residency in psychiatry at first, second, or third-year level is offered, which satisfies one of the three years of specialized training required for certification by the American Board of Psychiatry and Neurology. There are 25 attending psychiatrists, a full time occupational therapist, a full time psychiatric social worker, a part time recreational therapist, and a number of part time psychologists attached to the service. The inpatient service is an open one with no custodial cases accepted and only patients over 16, who give promise of good response, are admitted. There are three active psychiatric clinics—adult, child and adolescent averaging more than 2,500 visits each year.

Radiology

The hospital offers a three-year residency in radiology which satisfies the requirements for certification by the American Board of Radiology. Training in radiology is divided into two years of diagnosis and one year of therapy. The diagnostic section of the department contains ten x-ray machines, of which six are combination radiographic and fluoroscopic. The therapy section consists of the Henry Harrington Janeway Clinic which has a 1,000 curie cobalt unit, a 250 KV deep therapy unit, and a 100 KV superficial therapy unit. The department is authorized for the use of radioisotopes. A full time physicist is in attendance, who acts as radiation safety officer for the hospital. During an average year, 35,000 patients pass through the department for a total of 44,000 examinations, and some 250 patients are given 3,900 therapeutic treatments.

Surgery

Roosevelt offers a five-year program in surgery consisting of a (one-year mixed internship) and a four-year residency which satisfies the hospital training requirements for certification by the American Board of Surgery.

The Surgical Service consists of the first and second divisions and embraces all of the important surgical specialties except Ophthalmol-

EMERGENCY SERVICE

Surgical and medical residents rotate on the emergency service, with three men equally dividing the 24-hour shift. Because Roosevelt Hospital is located in the heart of Manhattan and its two ambulances serve the heaviest populated midtown area, its ambulances are always on the go. Patients brought into the emergency ward provide excellent opportunities for the resident to get invaluable experience.

The emergency ward and ambulance service operate on a round-the-clock basis. Each year, more than 9,000 ambulance calls are answered and approximately 40,435 patients are treated in the emergency ward which includes six treatment rooms, a fracture room with x-ray, a minor operating room, and an 11-bed observation ward.

ogy. Early specialization is discouraged. Thoracic, neurosurgical, orthopedic, plastic and general surgery are included in the surgical service.

Daily rounds are made with the chief resident and chiefs of service. The two surgical divisions have a combined conference each week at which the work is reviewed and interesting cases and diagnostic problems are presented. Surgical residents also attend regular conferences and lectures.

Urology

The hospital offers a three-year residency in urology which satisfies the hospital training requirements for certification by the American Board of Urology. In an average year, the resident will perform at least 100 major operations under the instruction of the attending staff. The Outpatient Department has an average of 2,300 visits. The residents perform the daily cystoscopy examinations for ward and Outpatient Departments under the supervision of the attending staff. There are daily x-ray conferences and ward rounds, and a monthly comprehensive departmental staff conference at which all members of the house and attending staff are present.

CLINICAL RESEARCH EDITOR

Roosevelt is one of the few hospitals in the country to offer members of the house and attending staffs the full time services of a medical clinical research editor, who provides bibliographic and editorial assistance to staff members preparing reports and papers on their clinical research. Editorial assistance includes searching medical literature for published articles on specific subjects, abstracting of articles of special interest, and writing up of case histories for publication.

Conferences

Because Roosevelt is a teaching hospital, established programs of resident instruction vary according to the division and specialty. There are general staff conferences for house and attending staffs of all services. Lectures and discussions on subjects of all types are given by the attending or invited speakers. One session yearly is devoted entirely to the presentation of selected papers prepared by house staff members.

There is a monthly tumor conference for house and attending staffs of all services. Each conference is devoted to a discussion of the pathological features of one specific group of neoplasms with clinical correlations.

There are monthly clinical pathological conferences for house and attending staffs of all services. Two cases are discussed, with the resident doctor making the presentation, the pathologist reviewing the autopsy, and the radiologist discussing the x-ray findings.

There are daily x-ray conferences for the Department of Radiology open to all services.

Tissue committee conferences are held at regular intervals, attended by the senior residents in general surgery and the surgical specialties. The committee reviews all preoperative surgical diagnoses in light of postoperative pathological findings.

Guest lecturers address the house and attending staffs of each service monthly.

Roosevelt Hospital's 40 Outpatient clinics record annually an average of 94,000 patient visits.

Patients visiting the clinics, the majority of whom are indigent sick, provide the house staff with unusual opportunities to treat a wide range of illnesses covering practically all disease entities.

Cardiopulmonary Laboratory

Roosevelt has a cardiopulmonary laboratory designed not only for service but also for research and teaching.

Medical residents receive training in cardiac catheterization, angiography, and pulmonary function testing.

Research efforts are now being focused on intracardiac electrocardiography. Residents who are particularly interested in doing cardiopulmonary research are encouraged to participate.

In 1959, a pilot surgical research laboratory was started, in order to have an experienced, well-equipped research organization operating as a "going" concern when the new Garrard Winston Memorial building is completed. Thus, basic research will be carried on at Roosevelt as a matter of hospital policy.

In commenting on Roosevelt's heritage of service, Mr. Peter B. Terenzio, executive vice president, pointed out that age alone is not the only measure of a hospital's greatness. "With each passing year, we must acquire new vigor if we are to keep pace. No matter how gratifying the past is to all of us interested in the achievements of our hospital, we must now focus our energies on the future opportunities facing us," he said. "We will continue to meet our challenges by providing a training center for the professions and by maintaining a round-the-clock health center for New York City's midtown community."



Why do you eat soup, Doctor?

For more than one reason. Certainly you eat soup because you like it, because soup is delicious, because it just happens to hit the spot — a savory, hot soup on a cold day, or a refreshing, chilled soup when the mercury's hitting the 90's. But you also eat soup because it's nutritious, because it provides nourishment and fluid which the body can readily utilize.

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WESTWARD HO!

An Easterner Takes to the Great Outdoors

As every GP knows, for a family physician in a suburban community to take a vacation, he's got to 'get out of town' or else, no vacation. I'm no exception to the rule. And since to detach myself from a ringing telephone, I must also detach myself (at least, temporarily) from my only source of income, there's no sense at all (I tell myself) in sticking too close to home.

Usually, medical conventions (sometimes in 'convenient' far off places) provide a good excuse—and noteworthy tax deductions—for my exodus from town. (The real truth is that my wife and I need no excuse to travel—just time and money!) However, even the most conscientious doctor who keeps up to date on his conventions can't get away with it forever—not if he has children. We have three, a son of 14 and two daughters, 11 and 8—delightful, but determined offspring. Our vacation plans for the summer of '59 didn't jell until the

*O beautiful, for spacious skies
for amber waves of grain,
for purple mountain's majesty
across the fruited plain . . .*

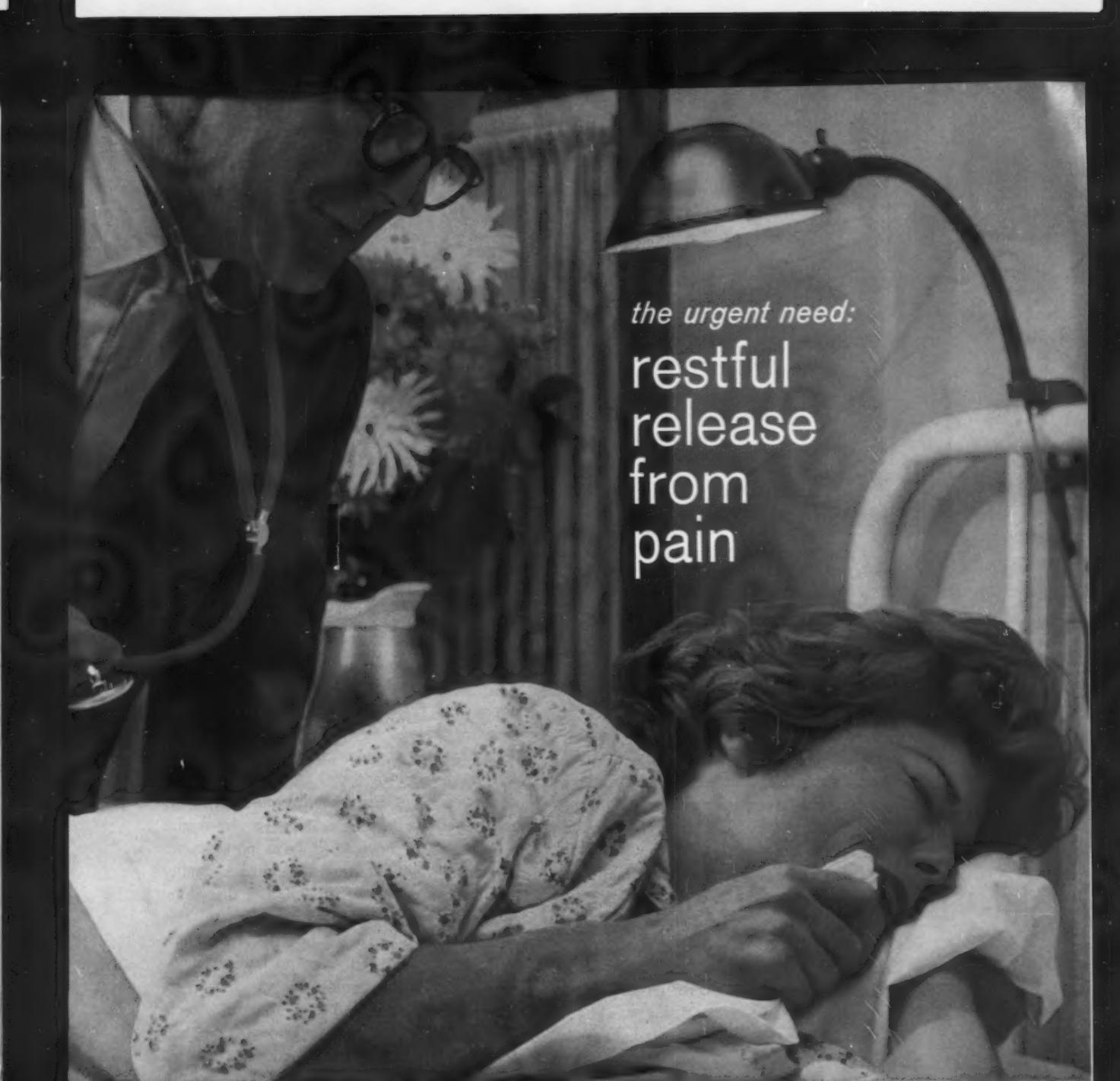
HOWARD R. SEIDENSTEIN, M.D.

children had their say. Then they rather forcefully let us know that they'd seen mighty little of America—"except for Hyde Park and Poughkeepsie"—and they wanted to see more: the great West, the deserts, the mountains, the Grand Canyon. . . . That's how 'I' decided that that summer the whole family would take the Grand Tour of the United States and Canada—while time and money held out.

When I am planning a trip, it doesn't surprise me to find that books, magazines, papers and

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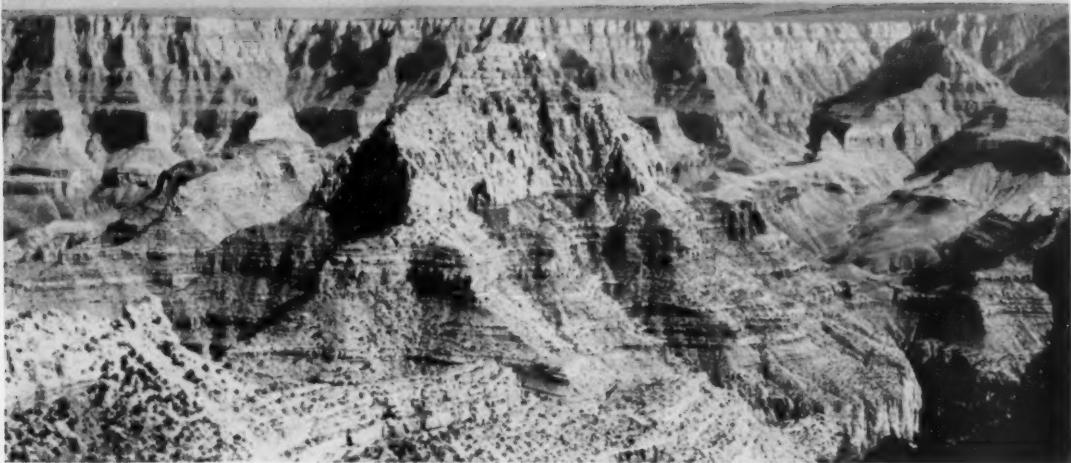
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NORTH OR SOUTH: No matter from what rim you see it, the Grand Canyon is majestic and grandiose.

TRAVEL

the like feature the places I expect to visit and this trip was no exception. From my gas station attendant I received a really excellent map, some expense folders and other useful brochures. That very Sunday the *New York Herald Tribune* Magazine Section featured a National Parks blurb plus a "send this coupon and receive" and so for a \$1.00 investment I received dividends of a large colored map and a list of all the parks, monuments and forests and more picnic grounds than I could visit in a lifetime.*

The travel bureau of the Canadian Government, having gotten word (from my gas station attendant, I believe!) that I was going park-seeing, came through with some handsome literature, including places to stay in the Jasper and Banff areas. Even the Provincial Government of Alberta got into the act, too. Within two weeks, through the courtesy of the Minister for Northern Affairs and National Resources, I had enough material for many a long winter nights' study. Fortunately, I enjoy the planning almost as much as the trip, for study I had to and did.

* Editor's Note: The Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., is another good source of descriptive literature on National Parks and Monuments.

Armed with my maps, brochures, newspaper and magazine articles—and the services of my local travel agent—I soon came to the conclusion that driving, my original idea, was impractical. I, as well as the family, would have to suffer through 400 to 500 miles of driving per day at various points of the trip. So, instead, with the help of my travel agent, I worked out an itinerary that could be covered both by air and rented car. To keep expenses down and still take in as much territory as possible, we flew a great circle taking advantage of family rates, meals on planes, return fare discounts, etc. In all, we covered almost 13,000 miles in 31 days with nary a slip-up: no connections were missed and there were no undue delays. Except for 20 continuous hours of rain at Moraine Lake in Canada and four middle-of-the-night hours of rain in Phoenix, we had perfect weather. In short, we enjoyed ourselves so thoroughly that we recommend you follow in our footsteps. (EDITOR'S NOTE: *There's no time like the present: Nothing is more lovely than the National Parks in autumn when the leaves are turning.*)

First on our list of "must sees," were the Canadian Rockies. When you go to Europe or an accessible area such as the Caribbean, you would normally fly to the place you plan to visit. National parks are another proposition altogether: they aren't ideal spots for receiving DC 7's and Viscount prop-jets. So when we

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References: 1. Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958.
2. Nathan, L. A., and Andelman, M. B.: Illinois M. J. 112:171 (Oct.) 1957.
3. Santos, I. M. H., and Unger, L.: Ann. Allergy 18:179 (Feb.) 1960. 4. Litchfield, H. R.: New York J. Med. 60:518 (Feb. 15) 1960.

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TRAVEL

flew to Edmonton, Alberta, we weren't really interested in Edmonton, but it was a fine spot to pick up a car to tour the Jasper and Banff national parks and Calgary was an ideal place to drop it off and take off for Vancouver and Victoria!

While travelling we tried to find accommodations which best reflected the particular charm or characteristic of each locale we visited. In Edmonton, a rapidly growing and new city, we stayed at a modern motel. In Jasper, where we were in really rugged country, we put up at the Edith Cavell Chalet, a rustic but more than adequate haven with good cuisine at reasonable prices.

At Moraine Lake—there is a lovely spot!—we lodged at the Log Cabins on the lake. The crackling logs in the fireplace were more than welcome on that chilly July 4th. This place, with all its rusticity and amiable hosts and hostesses, charmed us as few other spots have done. As for scenery, well, it was *Holiday Magazine's* "Place of the Month" sometime after our visit and they couldn't really have improved on it in the interim. No place I ever visited deserves the accolade more. Unfortunately, poor weather shortly after our arrival forced us into the more sumptuous surround-

ings at the Banff Springs Hotel. More for the kids to do on a rainy day, reasoned I; golf for Pop, says my wife! Though deservedly famous for location, golf course, pools and other facilities, it palled on the children. "Too stuffy," was their unanimous vote!

View from the Top

Mt. Norquay would never have had the pleasure of my company at its summit had it not been for my masculine pride. Though I was content to look at the view from the ground floor, so to speak, our 8-year-old girl insisted on going up in the chair lift. How was I going to let an 8-year-old, and female at that, make a sissy out of me? I'm not exaggerating when I say that scores of hesitant adults found the courage for the ascent in watching her. (I realize how "chicken" this may sound to many skiing enthusiasts, mountain climbers and others of their breed; but to repeat, I—and scores of "landlubbers" like myself—would have been content to watch from below.) For those who do make the ascent, the view of the Bow River Valley and the village nestling on its banks is the best thing in the area, but far less inspiring than Jasper.

By chance alone, we dropped our car at the Calgary airport just as the Stampede Parade was breaking up, a special thrill for the youngsters who enjoyed seeing the cowboys and covered wagons. Best of all was the cowboy band "serenade" at the air terminal—they knew we were leaving I told the kids; but even the youngest wouldn't buy that!

At Victoria it had to be the Empress, of course, the epitome of old English charm. Once again my wife and I enjoyed ourselves, but I don't think the children were properly impressed: the finer nuances of different cultures (or scenery, for that matter) are a little beyond children of that age.

Not so Mt. Ranier, at our next stop. This really impressed us all, as did Seattle with its lovely Lake Washington and environs, especially the public facilities for swimming. We took advantage of them when the weather was above 90 degrees at the lake. Less than two hours before, we had been at snow-covered Yakima Point!

Continued on page 128a

To Our Readers:

Do you have a personal travel story which you think may be of interest to other MEDICAL TIMES physicians? Perhaps in the past few years you went on an especially interesting fishing trip, took a motor tour around the country, vacationed in Mexico or some other picturesque corner of the world. If you would like to share your travel experience with other readers of this journal, just send us a brief outline of your story before you tackle the article. Write to:

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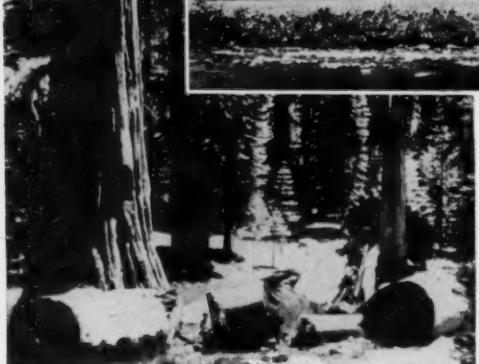
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OVERWHELMING: That is Yosemite National Park in a nutshell, whether it be the giant sequoia trees, the imposing "El Capitan" or the breathtaking Bridal Veil Falls.



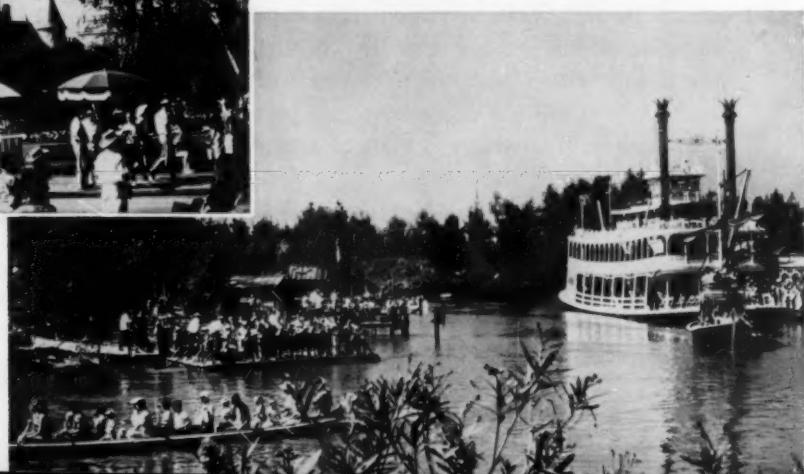
If accommodations are chosen to suit the area then the ones at the Mark Hopkins surely are in order. But then even if unsuitable, who could do better? The cheerfulness of our rooms, the view, Muzak, the service—these were things to spoil one and spoil they did. The only drawback was that the fog rolled in at 3:45 P.M. daily, spoiling the view from the Top of the Mark at cocktail time and from the cocktail lounge a little before 3:45, though we had a similar view from our own room at all hours.

The Kids Really Were 'Living'

However, only the top of one of the hills would be suitable for San Francisco and so in a way it was only fitting that the zenith of the trip for the youngsters was atop Nob Hill. There at the Fairmount, Jimmy Rodgers sang directly to their enthralled hearts as they sat at a ringside table in one of the Fairmount's supper rooms (the early show of course!). What with the autographs and meeting Jimmy personally (courtesy of the wonderful maître d'), the Jimmy Rodgers' story definitely topped Mt. Robson, and that's over 12,000 feet!

Almost as fast as rubbing Aladdin's lamp, we were once again among nature's wonders in Yosemite—but in keeping with this beautiful sight, this time to the Ahwahnee, whose decor was enough to subdue the young 'uns. Matchless scenery and then a rocket-like swing along the Cypress Coast to Monterey and Carmel

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Riboflavin (B ₂)	1.29 mg.
Calories	314

*Reconstituted: 1½ cups Instant Mix (90.5 gm.) added to 3¾ cups water—makes 1 quart

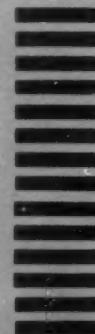
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TRAVEL

and back to the airport, whence we were whisked south to Los Angeles. We didn't stop until we reached La Jolla, our next headquarters for a few days. This quiet seaside community, probably the loveliest in southern California, contains a number of beautiful apartment motels wholly in keeping with the sedate charm and modern architecture of the area. After weeks of "hoteling" we welcomed our own kitchenette and bar: it was such a nice quiet place to retire to after a quick trip to Tia Juana, where (provincials that we are!) we all thanked the Almighty that we lived on *our* side of the imaginary line—although we had all spent a most interesting day on the other side.

If one is going to stop at Anaheim—and millions do—it's to see Disneyland. What could be a better choice than the Disneyland Hotel, a busy, bustling, beehive of activity catering to children of all ages and doing such a splendid job that both young and old are delighted with the accommodations as well as the deservedly famous Amusement Park. Our youngsters enjoyed every minute of it—except the one when they discovered that Mommy and Daddy had seen Lucy and Desi and their children while they were lost on Tom Sawyer's Isle! Nonetheless, Jimmy Rodgers still was first in their affections!

No Swimming

For the fabulous world of make believe that is the Los Angeles-Hollywood area, no place is quite as appropriate as the Beverly Hills Hotel—or so we thought. We had told the children of our previous experiences at this lovely hotel—breakfast in our own garden, the palatial polo lounge, the lovely lanai lounge, the movie stars, the style shows (official and unofficial). . . . The children were in seventh heaven as we pulled up in front of the marquee, back of a swiftly disappearing (no autographs!) Dean Martin. The first small disappointment of no private lanai for our rooms quickly vanished when a basket of flowers delivered to the children's room had them all aglow. It mattered little later when

they discovered the flowers were for Mrs. Bennett Cerf, the previous occupant; they'd had their day. Next, for a swim in the famous pool. Did I say swim? Dozens of people "draped" themselves over every inch of the pool area; nary a one in the water: in short, practically a virgin pool for the youngsters who are excellent swimmers and no competition off the boards for the middle one who is a tremendous diver. Alas, a sign informed us that all human animals under the age of 14 were ineligible for the pool after 1 PM. The most "decent" looking, acting, behaving and dressed members of society—our children!—were automatically barred by this obnoxious rule of the management. Regrettfully, we took off for less green but, nonetheless, more pleasurable pastures.

Our La Jolla experience put us right in the mood for the Del Capri in Westwood, a really excellent apartment motel. From this "home base" we soon acquainted our young folks with the delights of Chasin's, House of Murphy, La Rue's, Romanoff's, Sportsman's Lodge and the like. I think it is quite a tribute to their mother that they followed, when she led on the next leg of our journey, to the Sands at Las Vegas. Had they known that they were barred from any and all gambling including the five cent slot, I think they'd have remained in L.A. One must admit that an air conditioned suite at the Sands is appropriate in practically every way in this sand encircled gambling-made oasis.

Continued on the following page



"...that's 'O.B.'!!"

With Johnny Mathis, Eddie Fisher, George Gobel, Milton Berle, Jack Benny, and others in show business to entertain us (to say nothing of the Spectacles des Nues of recent vintage), we sure were eating high off the hog.

The time soon came to leave man-made luxury for nature's ruggedness once again and so, with bankroll intact (!?) (and water bag in tow), we were off in a cloud of dust for Zion. The cloud of dust is literal as one crosses the desert, but the lovely grandeur of the temples at Zion National Park, are well worth the dry dusty drive and are a must on any National Park tour. Except for camping areas, there is only the one lodge available with modest bungalows but it is more than adequate. Believe it or not, here again we came right in time for another celebration (no, not in our honor!)—Pioneer Day in Utah.

The country became even more rugged as we approached the fairyland that is Bryce—in contrast, the cottages actually seemed luxurious for our overnight stay. The Rangers here took the place of celebrations. Their talks are a regular feature of this masterpiece of nature, but even though they were not "specially for us" we enjoyed every bit of it.

The car trip to the North Rim of the Grand Canyon and subsequently past the Vermillion Cliffs and across typical cowboy-western-movie country, through a Navajo reservation, (this latter part our second longest but fascinating hop) can be made in such fast time that it was not tiring. However, though we saw both, I do feel that one rim of the canyon is sufficient on a trip of this sort. The canyon is magnificent from either side; it makes little difference whether it is North or South.

The ride to Phoenix was the longest and to all of us the most uninteresting part of the trip. The heat was uncomfortable even in an airconditioned car and the desert here isn't too much different from other more picturesque deserts we had passed. Phoenix itself offers most attractive motel as well as hotel accommodations. We chose one with an inviting swimming pool on the airport side of the city

so that the following day we could make a fast getaway for New Orleans.

My bargain hunting instinct was responsible for this next stop: New Orleans in mid-summer! My wife and I had loved the French Quarter on sight in 1942. After Centerville, Mississippi, and Camp Van Dorn, it looked like heaven. On this trip it still seemed heavenly albeit the climate was more like the other place! For less than \$75 (extra) we were able to show this historic spot to our three children, and to relive some of the pleasanter memories of World War II. The Monteleone with its air conditioning was even more delightful than we had remembered. Solari's is still lovely for breakfast, for its rareties of foods, pastries and liquors, but it surely has shrunk in size compared to the new giant supermarkets! Antoine's did not impress the children who are not yet connoisseurs enough to appreciate food for its own sake. Ramos Gin Fizzes at the Roosevelt, the Absinthe House, The Court of the Two Sisters, Jackson Square, Pirate's Alley, the wharf area, all brought back delightful memories. The food at Arnaud's was fit for the gods and our children proved to be the keys which unlocked the treasure chest of Arnaud's private patio and the famous collection of Mardi Gras costumes.

And Home . . .

New Orleans, or at least the Vieux Carre, is almost unreal, almost Disneylandish. To me, at least, it was an appropriate jumping off place for our return to every day living and the prosaic and the humdrum. A few short hours was all that was necessary for the conversion. And when a few short hours after that, I awakened in my own bed to a new day, to my rounds at the hospital, to my office hours, patients and *their* problems, all of it almost seemed like a dream—but a dream my wife and I could recall with profit and happiness for the rest of our days. As for the children, there can never be another "in my *whole* life I've never been any place . . ." unless, of course, space travel becomes such a part of everyone's thinking, that transcontinental jaunts like ours may well become the equivalent of ". . . except for Hyde Park and Poughkeepsie."

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Restores and maintains skin's normal protective acidity—speeds natural healing and helps sensitive skin resist irritants and infection.

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*Supplied: In Creme and Lotion (pH 4.6)

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Dermatoses, You Can EXPECT
RESULTS LIKE THESE WITH
COR-TAR-QUIN®**

pH 5.0

**Response of 113 Patients
with various skin disorders to Cor-Tar-Quin Creme and Lotion†**

Condition	No. of Cases	Complete Remission	Improved	No Response
Seborrheic dermatitis	37	31	6	0
Neurodermatitis	41	18	22	1
Atopic eczema	16	7	9	0
Tinea cruris	3	1	1	1
Other dermatoses	16	4	12	0
TOTALS	113	61 (54%)	50 (44%)	2 (2%)

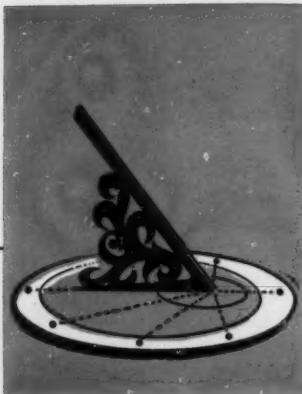
†Adapted from Olansky, S.

"Especially effective" for lesions characterized by SCALING, LICHENIFICATION AND INFECTION

Description: Cor-Tar-Quin is a unique topical creme or lotion, combining micro-dispersed hydrocortisone alcohol, ½%, or liquor carbonis detergens 2% and diiodohydroxyquinoline 1% in the Acid Mantle® vehicle.

Reference: (1) Olansky, S.: Antimicrobial-Steroid-Tar Combination in Treatment of Subacute and Chronic Dermatoses, J.M.A. Georgia 50:398 (Aug.) 1961.





Calendar of Meetings

A listing of important national and international medical conferences

NOVEMBER

Bethesda, Md. International Conference on Measles Immunization, Nov. 7-9. *Contact:* Public Health Service, National Institutes of Health, Bethesda 14, Md.

Columbus, Ohio. Urinary Stone Conference, November 10-11. *Contact:* Dr. Chester C. Winter, Division of Urology, Ohio State University Health Center, 410 W. 10th Ave., Columbus 10, Ohio.

Detroit, Mich. International Symposium on the Etiology of Myocardial Infarction, Nov. 16-18. *Contact:* Dr. Thomas N. James, Henry Ford Hospital, Detroit 2, Mich.

Nassau, Bahamas. Bahamas Conference on Medical and Biological Problems in Space Flight, Nov. 12-17. *Contact:* Mr. Irwin M. Wechsler, P. O. Box 1454, Nassau, Bahamas.

San Francisco, Cal. International College of Surgeons, Western Regional Meeting, Nov. 19-22. *Contact:* Dr. Walter F. James, 1516 Lake Shore Dr., Chicago 10, Ill.

DECEMBER

Chicago, Ill. American Academy of Dermatology and Syphilology, Dec. 2-7. *Contact:* Dr. Robert R. Kierland, Mayo Clinic, Rochester, Minn.

New York, N. Y. The Academy of Psychoanalysis, December 9-19. *Contact:* Dr. Joseph H. Merin, The Academy of Psychoanalysis, 125 East 65th Street, New York 21, N. Y.

Nassau, Bahamas. Bahamas Surgical Conference, Dec. 27-Jan. 6 *Contact:* Mr. Irwin M. Wechsler, P. O. Box 1454, Nassau, Bahamas.

JANUARY, 1962

Calcutta, India. Asiatic Congress of Obstetrics and Gynecology, Jan. 23-25. *Contact:* Subodh Mitra, M.B., 4, Chowringhee Terrace, Calcutta 20, India.

Chicago, Ill. American Academy of Orthopaedic Surgeons, Jan. 27-Feb. 1. *Contact:* Mr. John K. Hart, 29 East Madison St., Room 910, Chicago 2, Ill.

Los Angeles, Calif. Inter-American Conference on Congenital Defects (First), Jan. 22-24. *Contact:* Mr. Stanley E. Henwood, International Medical Congress, Ltd., 120 Broadway, Room 3013, New York 5, N. Y.

FEBRUARY

Chicago, Ill. American Academy of Forensic Sciences, Feb. 22-24. *Contact:* Dr. W. J. R. Camp, 1853 W. Polk St., Chicago 12, Ill.

Manizales, Colombia. Pan American Medical Women's Alliance, Feb. 17-24. *Contact:* Dr. Bernice Sacks, 200 15th Ave., North, Seattle 2, Wash.

Milwaukee, Wis. American Academy of Allergy, Feb. 5-7. *Contact:* Mr. James O. Kelley, 756 North Milwaukee St., Milwaukee 2, Wis.

Puerto La Cruz, Venezuela. Pan American Association of Oto-Rhino-Laryngology and Broncho-Esophagology, Feb. 25-March 1. *Contact:* Dr. Charles M. Norris, 3401 N. Broad St., Philadelphia 40, Pa.

MARCH

Bal Harbour, Fla. International Anesthesia Research Society, March 18-22. *Contact:* Dr. A. William Friend, 227 Wade Park Manor, Cleveland.

APRIL

Boulder, Colo. American College of Allergists, April 1-6. *Contact:* Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo.

Nassau, Bahamas. Bahamas Medical Conference, April 15-28. *Contact:* Mr. Irwin M. Wechsler, P. O. Box 1454, Nassau, Bahamas.

Hostile Environment...



The fungus, protozoa and bacteria that commonly cause mild and severe leukorrhea require a vaginal pH of 5 to 12 for proliferation.

Trimagill creates a hostile environment! It produces a pH of 2.0 to 2.5—*the three principal infecting organisms cannot live in this acid range.*

Trimagill is well tolerated and has been proved effective in thousands of cases of leukorrhea, vaginitis, cervicitis, moniliasis and mixed infections. No untoward reactions that would require discontinuation of treatment were reported. At times denuded mucous membranes are so irritated that Trimagill may give a *temporary* burning sensation. This is usually short lived.

Trimagill does not foster resistant mutants or result in monilia overgrowth. Trimagill may be used during menstruation.

CONTENTS: Tartaric Acid, Citric Acid, Boric Acid, Dextrose, Potassium Alum, Potassium Bitartrate and Adhesives.

SUPPLIED: Powder: 5-oz. Plastic Insufflator Bottles; Vaginal Inserts: Boxes of 24.

NOTE: Consult package circular for information on dosage and instructions for use.

Write for descriptive literature.



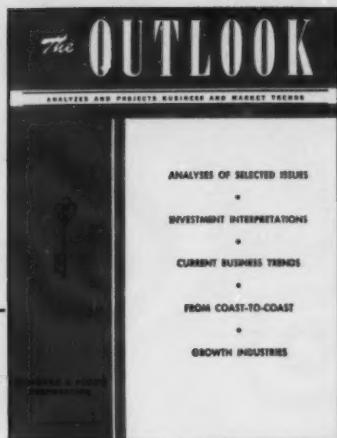
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*Patent applied for.



BY SPECIAL ARRANGEMENT

STANDARD & POOR'S

The world's foremost investment advisory service analyzes and projects business and market trends for Medical Times readers.

REVIEW LISTS FOR TAX SAVINGS

*Also Look for Opportunities to Strengthen
Portfolios Through Switching Operations*

Sales to establish tax losses, already a factor in the security markets, will become more numerous between now and the end of the year. However, the total volume of such sales promises to be comparatively moderate—certainly much smaller than in 1960, when the market trend was downward during the major portion of the year. Recently, the average share price, as measured by the Standard "500," was down 3% from the 1961 high, as compared with a loss of 13% during the corresponding elapsed portion of 1960.

The principal targets for selling will be those issues showing substantially larger declines. Prominent among these are electronics, vending machines, motion pictures, publishing, and office equipment.

Reviews of portfolios for tax-saving possibilities should be a year-round activity, but it is important to make a final survey before 1961 draws to a close. While considering the tax aspect also be on the alert for opportunities to strengthen investment positions through advantageous switching operations. The two can be combined.

• **THAW OUT FROZEN HOLDINGS** — Many investors still have sizable paper profits on securities acquired years ago, but have felt "locked in" because of the prohibitive taxes that would have to be paid. This problem can be relieved if you have losses on some of your

more recent acquisitions. Here is how to proceed. First, sell your securities priced below cost to establish a tax loss. You can then buy other issues of similar quality and character, or you can repurchase the same issues after 30 days.

Second, sell enough of your "frozen" holdings to absorb the capital loss in the aforementioned transactions. You can buy back immediately the same securities, because there is no waiting period in establishing gains. The advantage here is that you set up a higher cost which will reduce tax liability on a future sale.

• **CAPITAL GAINS AND LOSSES** — The gain or loss established on securities held for more than six months is classed as long term, and as short term if held six months or less. Long-term gains are matched against long-term losses, and short-term gains against short-term losses. Under the law in effect starting with 1952, both long-term and short-term capital losses are taken 100% into account, as shown in Examples 1 and 2. However, as illustrated in Example 3, only 50% of a net long-term capital gain is taken into account.

After these calculations, any net capital gain is added to your other income for taxation at the regular normal and surtax rates. However, an alternative tax rate of 25% can be used where there is just a long-term capital gain or an excess of long-term gains over long-

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refreshed
awakening**



This is the promise of Noludar 300... a night of deep, refreshing sleep without risk of habituation or toxicity... 6 to 8 hours of undisturbed rest... an easy awakening in the morning, free of fogginess or barbiturate "hangover." Try Noludar 300 for your next patient with a sleep problem. One capsule at bedtime. Chances are she'll tell you.

"I slept like a log"

NOLUDAR® 300

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EXAMPLE 1		EXAMPLE 2		EXAMPLE 3	
\$3,000 LONG-TERM LOSS;	\$2,000 SHORT-TERM GAIN	\$3,000 LONG-TERM LOSS;	\$2,000 SHORT-TERM LOSS	\$2,000 LONG-TERM GAIN;	\$1,500 SHORT-TERM LOSS
100% of long-term loss ..	\$3,000	100% of long-term loss ..	\$3,000	100% of long-term gain ..	\$2,000
100% of short-term gain ..	2,000	100% of short-term loss ..	2,000	100% of short-term loss ..	1,500
Net capital loss ..	\$1,000	Net capital loss ..	*\$5,000	Difference	\$ 500
		*\$1,000 allowed in one year; balance carried forward over five-year period.		50% of difference	250
				Net taxable long-term gain ..	\$ 250

term or short-term losses. This alternative method of reporting should be exercised beginning with taxable income of \$18,000 for a single person and \$36,000 for a married couple filing a joint return. In Example 3 the tax would be computed as 25% of \$500, or \$125.

First, list your actual gains or losses, long term and short term, already realized this year. Second, list your "paper" or unrealized gains or losses, long term and short term, on securities still held. Then, measuring the second group against the first, determine which paper gains or losses should be realized to offset losses or gains already established.

Capital Losses—Sell for loss to offset gains in the same year. The last day for establishing a loss will be December 29, whether on a cash or accrual basis.

Any excess of capital losses over capital gains may be set off against regular income to the extent of \$1,000. Any remaining unused net loss can be carried over a period of five years to be applied as an offset to future net capital gains and as a deduction from ordinary income not exceeding \$1,000 in each year. For example:

In 1956 X had a net capital loss of \$21,000. He used \$1,000 in 1956 as a deduction from ordinary income. He may then deduct the balance of \$20,000 in the following manner, assuming he had the capital gains shown.

	1957	1958	1959	1960	1961
Against net capital gains of	None	\$3,000	\$5,000	None	\$7,000
Against ordinary income	\$1,000	1,000	1,000	\$1,000	1,000
Total (\$20,000)	\$1,000	\$4,000	\$6,000	\$1,000	\$8,000

Long-Term Holdings—If you have a capital loss carryover from a preceding year, plan to sell before the end of this year an amount of stock sufficient to provide a profit equal to

your carryover. You thus pay no tax on the profits realized. Also, if you wish, you can repurchase the same stock. (Note: the 30-day "wash sale" rule applies only to losses.)

Long-Term Gains—It is advisable to take a long-term rather than a short-term gain. There is a tax advantage in your favor. You can then immediately reacquire securities sold at a profit, if you desire. December 22 will be the last day for establishing a gain except by cash sale.

Worthless Securities do not have to be sold to establish a capital loss, but you get no allowances until the securities are fully worthless and only in the year in which they became so. The year involved usually is not known until the Treasury completes its study of the facts. That may take a long time and may deprive you of some losses not claimed. In doubtful cases, therefore, it is advisable to make public sale of almost worthless securities if you have gains against which the losses can be offset.

Dividend Arrears—If you hold a preferred stock on which you have a long-term profit and on which dividend arrears are about to be paid, sell the stock just prior to the record date. Usually the stock will decline by the amount of the dividend payment when it goes ex-dividend. Repurchase after the record date if you want to reinstate your investment. As long-term profit, only 50% of the dividend is taxable. As dividend income, it is 100% taxable. The same is true of reorganization bonds that are about to pay off back interest, provided the bonds were traded "flat."

Exchanges—When you own stock for which you are about to receive cash, plus new securities, sell before the exchange date if you have a gain. Otherwise you may have some ordi-

STANDARD & POOR'S 1962 ANNUAL FORECAST

► 10 TIMELY NEW STOCK LISTS ◄

Which 349 Stocks to Buy and Sell in 1962!

**Get ready to profit in the growing
NEW BOOM with one of the most important
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NEW—Stocks to buy and sell now to be in a position to profit in the changing economy ahead.

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- 10 "Stocks for action"—Stocks capable of outgaining the market in 1962.
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- 16 Growth Stocks for Long-Term Profits.
- 35 Candidates for Stock Splits.
- 36 Income Stocks with Profit Potential.
- 18 Blue Chip Stocks for Safety and Income
- 12 High-Yielding, Top-Quality Bonds.
- 14 Convertible Bonds and Preferred Shares for Safe Income and Capital Gain.
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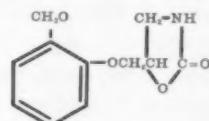
***TO RESTORE THE NORMAL
PATTERN OF EMOTIONAL RESPONSE***

TREPIDONE Mephenoxalone is a new tranquilizer which has shown the capacity to relieve mild to moderate anxiety and tension without detracting significantly from mental alertness. Treated patients have shown little tendency to become sleepy or detached from reality, or to experience euphoria as a result of the drug. They generally respond normally to everyday situations . . . require fewer restrictions on activities, and tend to complain less frequently.

Extensive trials have shown no habit-forming properties or adverse effects on withdrawal, even after long-term administration. Complete information on indications, dosage, precautions and contraindications is available from your Lederle representative, or write to Medical Advisory Department.

Average adult dosage: One 400 mg. tablet, four times daily. Supplied: Half-scored tablets 400 mg. TREPIDONE Mephenoxalone, bottle of 50.

*chemically distinct
from previous tranquilizers*



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nary income instead of capital gains. To reinstate your investment buy the new securities; do not repurchase the old stock.

Wash Sales—You cannot deduct a loss sustained from the sale of stock or securities if, within a period beginning 30 days before and ending 30 days after the sale, you reacquired by purchase (or entered into a contract to acquire) substantially identical property. That is termed a "wash sale." The ending of your tax year during this restricted 61-day period does not prevent the denial of your deduction.

This prohibition does not apply: (1) If you are an individual sufficiently active in security transactions so that it can be called your "trade or business," even though you may have other businesses; (2) if you are doing business as a dealer in stocks or other securities; (3) to transactions resulting in a gain; and (4) to acquisitions by gift, inheritance, or a tax-free exchange.

You can effectively avoid the wash-sale rule by buying back other securities in the same

industry or issues possessing similar characteristics. For example, if you sell Continental Can buy American Can, or vice versa. If you want to continue your position and yet establish a loss, you can buy an equivalent number of shares, hold the double amount for 31 days, and then sell the original holding.

Contributions—The cost of contributions can be cut by giving securities that have appreciated in value. You are allowed a deduction on the basis of current value, and you avoid payment of the capital gains tax on appreciation over the original cost.

Investment Companies—Beginning in 1957, regulated investment companies have been allowed to retain realized profits and pay a 25% tax for the account of stockholders. The latter may include as long-term capital gains the amount of undistributed long-term capital gains designated by the companies and receive a tax credit of 25% of the amount so included. Moreover, they are allowed to write up the cost of their shares by 75% of the undistributed profits.

OPPORTUNITIES IN

This issue contains the first of a series of special reports on growth stocks.

Standard & Poor's has long recognized growth stocks as a major type of investment opportunity. Analysis of these issues is now being refined by a process of systematic screening, employing data processing equipment.

Just completed is the first step in a long-range program of research in the utilization of automatic data processing equipment as a tool in security analysis. Earnings of several thousand companies have been programmed, with the equipment selecting those meeting predetermined growth criteria. We expect to expand this program to include additional income and balance sheet statistics, so that the characteristics can be more completely defined.

The information set forth herein has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed.

Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for the latest prices.

GROWTH STOCKS

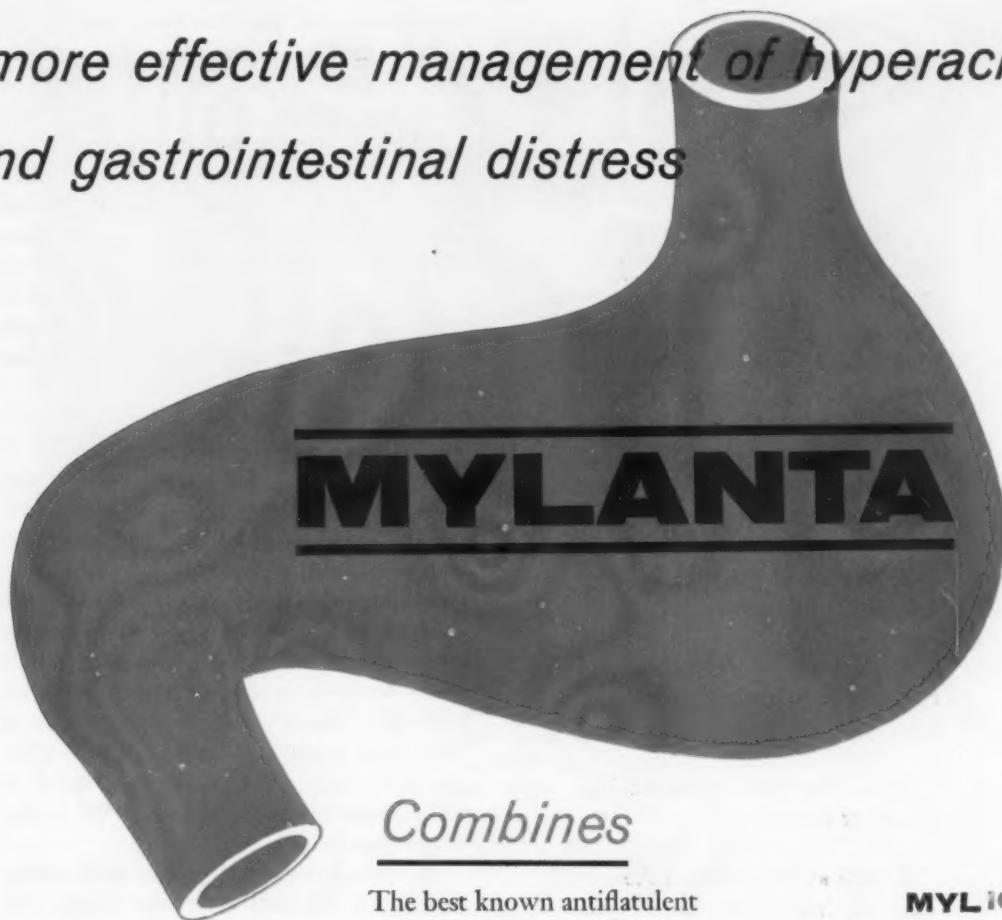
There is, of course, a built-in fallacy in every mechanical approach to security analysis. However, just as purely technical market studies can sometimes reveal supply-demand factors that might not be uncovered by the fundamental approach, so, too, we believe that data processing techniques can be successfully employed by the investor to narrow his area of inquiry.

A straight statistical screening, based on rate of earnings growth, gives no weight to balance sheet factors, management factors that might not be readily apparent from the numbers, the foreseeable advent of competitive products, etc. In short, we must assume in our initial screening that the "growth quality factor" is the same for all stocks; but we will attempt to correct this inherent fallacy by supplementing our data processing screening with intensive and continuing analysis and field investigation.

The term "growth stock" has been used so

NEW

*for more effective management of hyperacidity
and gastrointestinal distress*



Mylanta Tablets:

ONE TABLET CONTAINS:

Magnesium Hydroxide 200 mg.
Aluminum Hydroxide 200 mg.
(Dried Gel)
Methylpolysiloxane (activated) . 20 mg.

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Aluminum Hydroxide 200 mg.
(equiv. to Dried Gel, U.S.P.)
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SUGGESTED DOSAGE: To be taken between meals and at bedtime. Tablets: One or two tablets, well chewed. Liquid: One or two teaspoonfuls.

AVAILABLE: Boxes of 100 MYLANTA TABLETS and 12 ounce bottles of MYLANTA LIQUID at all pharmacies.

Write for professional samples.

The best known antiflatulent

MYLICON

The best known antacids
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A more effective treatment for hyperacidity, ulcers and gastrointestinal distress. MYLANTA contains a proven combination of antacids for relief of hyperacidity plus the antifoam agent, MYLICON, for more effective relief of gastrointestinal distress due to entrapment of gas.

Advantages

Acts faster • Works longer • No chalky taste • Soft easy-to-chew tablets • Pleasant tasting liquid • Non constipating

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GUIDE FOR INVESTORS

Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.
2. Beware of promises of quick spectacular price rises.
3. Be sure you understand the risk of loss as well as prospect of gain.
4. Get the facts — do not buy on tips or rumors.
5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.

loosely over the past few years that the expression itself has become somewhat meaningless. Nevertheless, selected growth stocks do constitute valid investment situations. There has been no growth whatever in aggregate corporate profits over the past five years, yet companies covered in the accompanying supplement have all shown excellent earnings gains in this interval. The conclusion is obvious that these companies offer a fertile field for potential investment; the only questions revolve around price and the prospects for sustained future growth.

On the other hand, we recognize that this group represents only one of a number of possible types of investment opportunities, including cyclical stocks; income stocks; turnaround management stocks; and companies with an essential new product, process or merchandising method, etc. These and others will continue to absorb the major efforts of the editors of Standard & Poors. Obviously, growth stocks are not the correct answer for every investment objective, nor the only source of capital gain potential. Moreover, like all other stocks, they can at times be overvalued, as well as undervalued, in relation to the market as a whole.

The principal risks in growth stock investment are of two kinds: (1) those arising from internal stresses within the company, generated by its rapid expansion, and (2) those related to the price of the stock itself. The former can be evaluated only by close surveillance of management's effectiveness and by continuing study of product sales potentials. The latter can be subjected to statistical analysis that should yield a better insight into possible rewards and risks involved in purchasing a given growth issue than is available through the all too common practice of making growth stock investment decisions on the basis of faith and intuition.

As growth rates increase in magnitude, the probability that they will be maintained in the future diminishes. Thus, it would be far easier for growth to continue at a 5% rate than at a 50% rate. Consequently, a stock that has experienced a 50% per annum growth rate in the recent past should not sell for 10 times as

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correct
constipation

without
whipping
the bowel

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Tablets

For recurrent or chronic constipation in patients of all ages.
A peristaltic stimulant acting through the blood stream specifically upon the intramural myenteric plexus of the colon. Motility of the small bowel not affected. Evacuation within 6 to 12 hours without cramping or griping. Each scored tablet contains 75 mg. of 1,8 dihydroxyanthraquinone.

**with
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DORBANTYL®

Orange and Black Capsules

A dual-purpose bowel evacuant, combining the stool-softening effect of dioctyl sodium sulfosuccinate (50 mg.) with the non-gripping peristaltic stimulation of Dorbane (25 mg.) in each capsule. This combination brings relief in "hardstools" constipation or fecal impaction.

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The advantages of Dorbantyl in double-strength potency for convenience and economy. Especially useful in geriatric practice and in patients recalcitrant to ordinary laxatives through prolonged use or habituation.



Northridge, California

much on a price-earnings basis as one with a 5% rate.

Some analysts have attempted to adjust for this difference by damping down the higher growth rates, but this in itself is an arbitrary factor in the evaluation. We prefer to compare growth premiums and growth rates of individual issues, and thus attempt to arrive at norms for growth stocks. Each month we will make recommendations for current purchase. Summaries of field investigations on these companies will appear as warranted, until the stocks are dropped by reason of failing to meet the

minimum growth standards that have been established.

By means of such intensive supervision, we hope to avoid for our readers some of the pitfalls of overstaying commitments in "tired growth stocks" and of paying excessive premiums for younger, essentially unseasoned growth issues. To further limit risks, we would suggest that you purchase a "package" of several well-regarded issues. Such a program, accumulated by the dollar cost averaging method, should bring worth-while rewards over a period of time.

EIGHT RECOMMENDED GROWTH STOCKS

● AMERICAN DISTILLING COMPANY has an impressive record of growth in the last decade in a traditionally competitive industry. Sales and earnings have risen each year since 1952, except when fire interrupted operations in 1954. The outlook is equally promising. Growth to date has been accomplished without the benefit of a single top volume brand in its three principal products—blended whiskey, straight bourbon and vodka. The prospect for future earnings growth is bolstered by the likelihood that the company will intensify its efforts to establish at least one brand as a major volume leader in one of these fields. Other products include gin, corn whiskey, and several imported brands. Facilities are among the most modern in the industry.

Cost consciousness and tight organization have resulted in pretax margins after excise taxes of close to 20% since 1959. The return on equity for the year ended September 30, 1960, was 10.3%. Proceeds from a proposed \$9.5 million offering of convertible debentures to stockholders would be used to prepay \$7 million bank loans and for working capital. At this writing, earnings for the year ended September 30, 1961, are estimated at \$2.65 a share, up from \$2.38 last year, on a sales gain of 7% to \$100 million. Sales and profits in 1961-62 should be higher. Dividends, now at \$1, could well be increased for the seventh straight year, although the payout will probably continue below 50%. Earnings growth

has been 12.7% annually in the past five years, yet this issue is selling at a discount from the S & P 425 stock index. *In view of the record, the outlook, and the low price-earnings multiple, we recommend this issue for purchase on any weakness that might accompany the forthcoming offering of convertible debentures.*

● BRUNSWICK CORP., major producer of bowling equipment, continues to experience higher sales of its automatic pinsetter. Contrary to recurring stories of "saturation" of bowling alleys domestically, the company's backlog is presently at record levels, and sales of bowling equipment abroad are just beginning to become significant. Estimates call for the construction of 3,000 bowling lanes abroad during 1961, with the company obtaining its traditional 50% of the market. This could double in 1962. A good number of the Brunswick installations will be in Japan, where the company is operating jointly with the Mitsui interests. Thus, with domestic volume expected to hold up well over the next few years and foreign sales entering a stage of possibly dramatic growth, the outlook for bowling equipment remains favorable.

Moreover, diversification moves into other areas of recreation, into hospital supplies, and into school equipment are beginning to pay off. In the boating field the company recently acquired Kiekhaefer Corp., manufacturer of the Mercury outboard engine. This will permit

Inflammation Takes Flight

Tandearil®
brand of oxyphenbutazone

a new
development
in nonhormonal
anti-inflammatory
therapy

Geigy

Remarkably useful in a wide variety of inflammatory conditions, including: rheumatoid arthritis, spondylitis, osteoarthritis¹⁻⁶; gout,^{1,7,8} acute superficial thrombophlebitis^{9,10}; painful shoulder (peritendinitis, capsulitis, bursitis, and acute arthritis of that joint)^{1,7}; severe forms of a variety of local inflammatory conditions.^{11,12,13}

The physician should be thoroughly familiar with the dosage, side effects, precautions and contraindications of Tandearil before prescribing.

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more specific than steroids — Acts directly on the inflammatory lesion without altering pituitary-adrenal function...without impairing immunity responses.^{11,14}

more dependably absorbed than enzymes — Tandearil, a simple, non-protein molecule, is rapidly and completely absorbed,^{4,15} consistently providing effective blood levels.

far more potent than salicylates—
Anti-inflammatory potency of Tandearil markedly superior to aspirin.^{2,16}

availability:

Round, tan, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

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Division of Geigy Chemical Corporation
Ardsley, New York

references:

1. Graham, W.: Canad. M. A. J. **82**:1005 (May 14) 1960. 2. Vaughn, P. P.; Howell, D. S., and Klem, I. M.: Arth. and Rheumat. **2**:212, 1959. 3. O'Reilly, T. J.: J. Irish M. A. **46**:106, 1960. 4. Cardoe, N.: Ann. Rheumat. Dis. **18**:244, 1959. 5. Robichaux, E.: General Practice **24**:14, 1961. 6. Brooke, J. W.: Western Med. **2**:81, 1961. 7. Connell, J. F., Jr., and Rousset, L. M.: Am. J. Surg. **98**:31, 1959. 8. Brodie, B. B., et al., In Contemporary Rheumatology 1956, p. 600. 9. Stein, I. D.: Ann. N. Y. Acad. Sc. **88**:307 (March 30) 1960. 10. Barczyk, W., and Röth, W.: Praxis **49**:589, 1960. 11. Miller, J. M., et al.: Antibiotic Med. and Clin. Therap. **7**:109, 1960. 12. Connell, J. F., Jr., and Rousset, L. M.: Am. J. Surg. **97**:429, 1959. 13. Summary of individual case histories submitted to Geigy. 14. Domenjoz, R.: Ann. N. Y. Acad. Sc. **86**:263, 1960. 15. Smyth, C. J.: Ann. N. Y. Acad. Sc. **86**:292, 1960. 16. Yü, T. F., et al.: J. Pharmacol. and Exper. Therap. **123**:63, 1958.



**When
there's a
pram in her
future,
she'll need
Pramilets®
today**

**Comprehensive vitamin-mineral
support with just 1 Filmtab® daily**

No one's ever said that looking ahead isn't a wise idea. (Granted, in time to come, thought will have to be given to diaper laundering.) However, perhaps little mother-to-be *should* take first things first. Between now and arrival day, for instance, there's probably nothing that'll take precedence over the sound diet you'll prescribe for her. And Pramilets—with its stepped-up formula—more than ever complements the established regimen.

What's in order? Calcium? She gets a generous allowance with Pramilets. Iron? Pramilets provide a solid 40 milligrams of elemental iron (ferrous fumarate — the kind that's best-tolerated). As for the balance of the improved Pramilets formula, among the significant nutrients, vitamins C, B₆ and B₁₂ have all been increased.

Finally, some of Pramilets' patient-pleasing features: Convenient dosage — one a day, usually . . . a compact size tablet . . . and an attractive bottle for table or dresser.

Pramilets supplied in bottles of 100 and 1000 Filmtabs — and new 180-Filmtab Economy Bottle. Also available: Pramilets-F (Rx only) with Folic Acid.

109240

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the company to sell "mated" hulls and engines, since it already is producing the Owens and Larson line of hulls. For the current year, earnings are estimated at \$2.70 per share against \$2.28 in 1960. Dividends at \$0.40 annually are highly conservative. *The stock offers appeal for representation in the fast-growing, leisure time and hospital supply segments of the economy.*

• GENERAL FOODS, the largest producer of packaged foods, has recorded an increase in sales and earnings every year in the past decade. In the interval from fiscal 1951 through fiscal 1961, sales will have almost doubled and earnings more than tripled. Much of the company's success results from its marketing of new products and expansion into new areas. Coffee is still the largest item in its product lists, accounting for around a third of sales, followed by frozen foods, which contribute 15%. Some of its well-known brands include Postum, Post cereals, Jell-O, Maxwell House Coffee, Minute rice, Swans Down flour and mixes, Kool-Aid, and Birds Eye frozen foods. Foreign markets, principally in Europe and Australia, appear to offer the most promising immediate potential. In 1959-60, some 5% of volume was derived from overseas. For the year to March, 1962, it is estimated that this will grow to 10%, and to 15-18% within three years.

Sales in the current year are estimated at \$1,220,000,000, up 5% from the \$1,160,000,000 of last year. Earnings should equal \$2.85 a share vs. the \$2.69 of 1960. Further growth in sales and earnings is foreseen for 1962-63. The new \$1.60 dividend might be increased next year. The dividend payout usually is 50% of profits. Return on invested equity for General Foods has widened gradually in recent years and is now around 18%. Long-term debt has been steadily reduced in the last decade, and the company's financial position is strong. *While the stock is selling at a premium in relation to the S & P 425, this in part reflects strong investor confidence in the management of this well-run company and the belief that the past earnings performance will be extended. We regard this issue as a*

worthwhile commitment in growth portfolios at current prices.

• HAMILTON'S MANAGEMENT CORP. distributes and manages the \$250 million Hamilton Fund. It is the largest direct selling organization in the mutual fund field, with over 7,000 full and part-time salesmen. Income is derived from commissions on the sale of funds and from management fees amounting to one-half of 1% of the fund's net asset value. The fund is sold both on a single payment basis and on a contract basis under which the purchaser pays into the fund monthly for 12½ years. In the fiscal years 1955 through 1961, net sales commissions have increased at a 40% annual rate and management income has grown 35% yearly. The Hamilton Fund (sold in two series) has expanded from \$31 million at the end of 1955 to \$250 million currently. Meanwhile, the unpaid balance on contractual plans has increased from \$35 million to \$440 million.

Earnings per share have risen tenfold from \$0.08 in 1955 to \$0.80 in the year ended April 30, 1961. For fiscal 1961-62, profits are running more than 50% ahead of year-earlier levels and are estimated at \$1.10 per share for the full 12 months. Investors are appraising this issue conservatively because of possible SEC action to enforce a scaledown of mutual fund management fees. Hamilton derives only 30% of revenues from this source; therefore, a forced scaledown would probably reduce the company's projected 30% annual growth rate but not affect its present earnings base. Dividends (increased annually since 1955) are conservative at \$0.06 quarterly plus a year-end extra. *At 21 times estimated 1961-62 earnings the stock is selling at only a nominal premium relative to the S & P 425 and offers outstanding long-term investment value.*

• INTERNATIONAL BUSINESS MACHINES has long been the leading factor in the rapidly expanding electronic data processing field. A steady stream of new products attests the excellence of its research and development program, while the marketing organization is considered the best in the industry. Reflecting these capabilities, earnings rose from \$2.77 a



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HYDRODIURIL® WITH MEPROBAMATE
HYDROCHLOROTHIAZIDE

to relieve the symptoms of premenstrual tension

for EDEMA... CYCLEX provides the prompt diuresis of HYDRODIURIL for rapid reduction of weight gain, breast fullness, abdominal congestion

for MOOD-CHANGES... CYCLEX supplies the effective relief of meprobamate for nervousness, irritability, tension, nausea, malaise, insomnia

for GI DISTRESS... CYCLEX affords quick-acting relief of nausea and bloating associated with premenstrual tension

SUPPLIED: Tablets, bottles of 100. Each tablet contains 25 mg. of HYDRODIURIL(hydrochlorothiazide) and 200 mg. of meprobamate.

DOSAGE: Usual adult dosage is one tablet once or twice a day, beginning on the first morning of symptoms and continuing until the onset of menses. CYCLEX may be continued through the menstrual period.

Before prescribing or administering CYCLEX, the physician should consult detailed information on use accompanying package or available on request.

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PERTINENT STATISTICAL DATA ON SELECTED GROWTH STOCKS

ISSUE	YEAR ENDS	SHARES (000)	*EARN. 1960	\$ PER SH. 1961	1961 PRICE RANGE	APPROX. RECENT PRICE	INDIC. DIVD. \$	YIELD %	GROWTH 5-YR. TREND	RATES(%) Curr. Yr. Est.	P-E RATIO
AMERICAN DISTILLING ..	Sept.	955	2.38	2.65	47½- 29%	47	1.00	2.1	12.7	11.3	15
BRUNSWICK CORP.	Dec.	16,857	2.28	2.70	74½- 44	62	0.40	0.6	61.0	18.4	21
GENERAL FOODS	Mar.	24,845	2.69	2.85	96 - 68%	92	1.60	1.7	10.1	5.9	33
HAMILTON MANAGEMENT \$	Apr.	867	0.80	1.10	28 - 15%	23	0.29	1.3	42.0	37.5	21
INTL. BUSINESS MACH. ..	Dec.	27,516	6.12	7.65	547 - 387	553	2.40	0.4	22.0	25.0	71
REYNOLDS (R. J.) TOBACCO	Dec.	40,000	2.61	3.00	75½- 35%	73	1.50	2.1	14.9	14.9	24
SAN DIEGO IMPERIAL ...	Dec.	5,837	0.56	0.75	14½- 7%	16	-	-	23.0	33.9	17
SWINGLINE INC. CLASS A	Aug.	1,050	1.51	1.95	42½- 22%	41	1.00	2.4	32.4	29.1	21

†All listed on New York Stock Exchange unless otherwise noted. §Over the counter. *Figures for years ended through May shown in prior year's column. E—Estimated. ^Adj. for 2-for-1 split approved Sept. 6. *Paid 5% in stock.
For additional data and definition of terms see accompanying supplement. The S&P 200 Rapid Growth Stocks.

share in 1956 to \$6.12 last year (adjusted), representing a compound growth rate of 22% for the period. Although this record is outstanding, particularly for as large and mature a company as IBM, it does not fully show the concern's progress. Reported earnings for the five years through 1960 included only the dividends received from IBM World Trade Corp., a wholly owned subsidiary which conducts IBM's swiftly expanding foreign activities. Including this subsidiary's earnings on a fully consolidated basis, 1960 profits amounted to \$7.45 a share. Cash flow, particularly important in this situation because a significant portion of the business represents rentals, equaled \$14.04 a share for the parent company alone in 1960.

Reported profits for 1961 are estimated at a peak of around \$7.65, with cash flow expected to rise comfortably above \$16. Inclusion of the undistributed earnings of the foreign subsidiaries would add another \$1.50 or so a share. Despite increasing competition, further worthwhile profits growth is anticipated for IBM in 1962 and beyond. While traditionally commanding a large premium for the company's promising potential, the high-quality shares continue to have attraction for investors primarily interested in long-term capital appreciation.

● REYNOLDS (R. J.) TOBACCO gives every indication of extending its outstanding growth record. In 1960, the company increased its percentage of the total cigarette market for the sixth straight year, and its Camel, Winston and

Salem brands maintained their leadership in their respective markets. Superior market research and attention to new product introduction have in part enabled Reynolds to do so well. Its return on stockholder equity is approximately 20%, which makes implementation of a diversification program difficult, since so few companies can meet its performance. Much of the immediate growth for this company is likely to take place in Europe, where Reynolds has bought controlling interest in a leading German cigarette manufacturer. Foreign earnings (not presently consolidated) are now relatively small. Earnings in 1961 (adjusted for the pending split) are estimated at \$3 a share, up from the \$2.61 a share of last year. Dividends were recently increased to \$0.37½ per share. The 2-for-1 stock split, approved by shareholders, became effective October 6, 1961. Finances are strong, and no equity financing is necessary.

Despite its stellar earnings growth of almost 15% compounded annually, this issue is still selling at a relatively modest premium over the S & P 425 Stock Index. We believe it continues to merit consideration in every growth-oriented portfolio.

● SAN DIEGO IMPERIAL owns seven savings and loan associations in Texas, four in California, one in Colorado, and two in Kansas. The growth potentials in California for this type of business are widely recognized, but, according to management, growth in the company's trade areas in Texas, Colorado, and Kansas have been and are continuing at an

DIAPER-
RASH
THERAPY
BEGINS
HERE

WITH
Diaparene® BABY PRODUCTS for simple, complete skin care

Diaper rash can best be treated by relieving the irritation and by inhibiting the action of the urea-splitting bacteria that release searing ammonia.

You'll get both emollient and antibacterial action on the baby's skin with Diaparene Anti-bacterial Ointment. In the wet diaper, Diaparene Antiseptic Rinse destroys bacteria and prevents ammonia formation and odor for up to 15 hours after soiling. Have the mother use the rinse at home or get Diaparene-impregnated diapers from a franchised diaper service.

To prevent diaper rash suggest Diaparene Tod'l® for baby's daily bath. Tod'l washes skin faster and better than ordinary soap . . . inhibits growth of new bacteria. For added antibacterial protection against diaper rash, prickly heat, and chafing, recommend Diaparene Baby Powder or Baby Lotion.

BREON Diaparene Products Division, Breon Laboratories Inc., New York 18, N. Y.
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IN CERTAIN
MENINGEAL INFECTIONS
effective cerebrospinal
fluid levels—
effective antibacterial action

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

In the management of certain meningeal infections, CHLOROMYCETIN offers unique advantages. It has been described by one investigator as "...the best chemotherapeutic agent for patients with *H. influenzae* meningitis...."¹ In comparative *in vitro* studies,² CHLOROMYCETIN showed the "highest effectiveness" against *Hemophilus influenzae*, *Diplococcus pneumoniae*, streptococcus, and numerous other pathogens. Another report states: "Chloramphenicol is regularly detected in the cerebrospinal fluid when blood levels greater than 10 micrograms per ml. are reached."³ Blood levels of this magnitude are easily attainable with the administration of CHLOROMYCETIN by either the oral or parenteral routes.

CHLOROMYCETIN effectively penetrates the blood-brain barrier;³⁻⁶ provides effective action against *H. influenzae*^{1-4,7-9} and other invaders of the meninges.^{5,7,10,11} Product forms are available for administration by the intravenous, intramuscular, and oral routes. For these reasons, CHLOROMYCETIN has contributed conspicuously to the dramatic drop in mortality rates in meningeal infections caused by *H. influenzae* and other susceptible microorganisms.

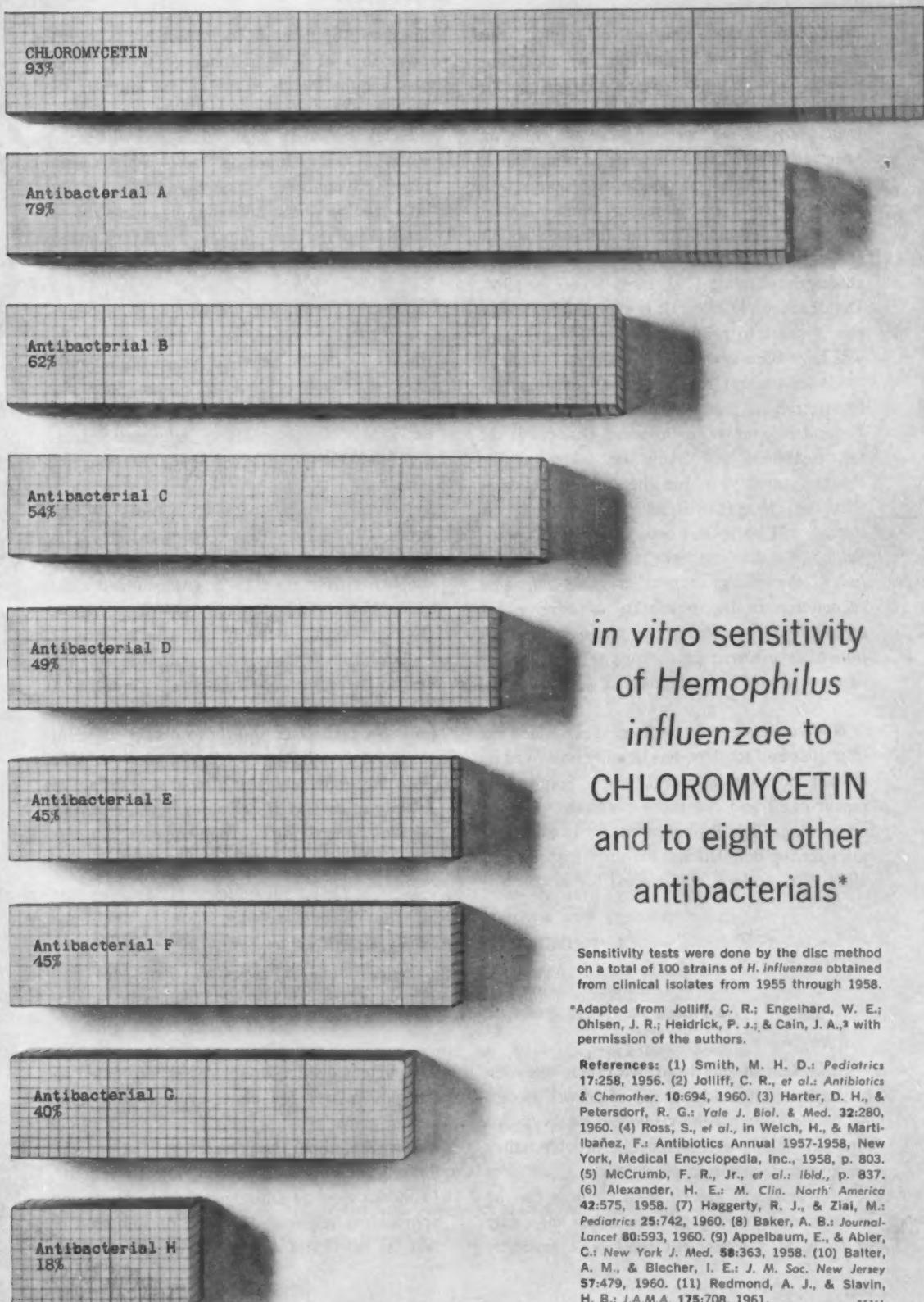
CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapsseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

PARKE-DAVIS

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*in vitro sensitivity
of *Hemophilus
influenzae* to
CHLOROMYCETIN
and to eight other
antibacterials**

Sensitivity tests were done by the disc method on a total of 100 strains of *H. influenzae* obtained from clinical isolates from 1955 through 1958.

*Adapted from Jolliff, C. R.; Engelhard, W. E.; Ohlsen, J. R.; Heidrick, P. J.; & Cain, J. A.,² with permission of the authors.

References: (1) Smith, M. H. D.: *Pediatrics* 17:258, 1956. (2) Jolliff, C. R., et al.: *Antibiotics & Chemother.* 10:694, 1960. (3) Harter, D. H., & Petersdorf, R. G.: *Yale J. Biol. & Med.* 32:280, 1960. (4) Ross, S., et al., in Welch, H., & Martínez, F.: *Antibiotics Annual 1957-1958*, New York, Medical Encyclopedia, Inc., 1958, p. 803. (5) McCrumb, F. R., Jr., et al.: *Ibid.*, p. 837. (6) Alexander, H. E.: *M. Clin. North America* 42:575, 1958. (7) Haggerty, R. J., & Ziai, M.: *Pediatrics* 25:742, 1960. (8) Baker, A. B.: *Lancet* 80:593, 1960. (9) Appelbaum, E., & Abler, C.: *New York J. Med.* 58:363, 1958. (10) Balter, A. M., & Blecher, I. E.: *J. M. Soc. New Jersey* 57:479, 1960. (11) Redmond, A. J., & Slavin, H. B.: *J.A.M.A.* 175:708, 1961.

even faster rate. Impressive results were recorded in the first half of 1961, when earnings rose 44% to \$0.40 a share on a larger capitalization, from \$0.31 a year before. Real estate loans outstanding were up 17% from the year-earlier level, while savings accounts scored a like gain. Although outstanding shares were increased further by recent conversion of debentures, earnings for the full year should still approach \$0.80 a share (based on average shares outstanding), up from \$0.60 in 1960. Dividends are in stock. It is expected that when this appears in print another 5% distribution will have been declared in October.

Under present regulations, all earnings are transferred to reserves without liability for Federal income taxes. Proposed changes in the tax treatment will likely be taken up by Congress next year, but the current feeling is that the changes will be moderate and the impact will be spread over a period of years. *Selling at a discount from the S & P 425 stock index, the shares appear to give adequate recognition to the possibility of adverse tax legislation. Considering the promising growth potentials inherent in the business, purchases of stock should work out well.*

● SWINGLINE INC., the largest manufacturer of staples and staplers, has steadily improved its market position in recent years. Staples are repeat items and constitute a stabilizing factor on earnings. The Swingline record is excellent, sales having doubled and earnings tripled since 1957. The outlook, while good for established

lines, will be determined in part by its 57.8% ownership of Wilson Jones (NYSE), which was acquired in late 1959. The latter is the largest manufacturer and distributor of commercial stationery and office record-keeping materials. By injecting new management, improved controls, better merchandising and improved products, Swingline has been able to turn Wilson Jones into a highly profitable operation. This company may be merged into Swingline in 1962.

For the fiscal year just ended, Swingline is expected to show earnings of \$1.95 a share vs. the \$1.70 of the previous year. Both figures include equity in Wilson Jones. Sales for 1960-61 were adversely affected by discontinuance of the unprofitable industrial fastener division, which contributed \$846,000 to volume last year.

Assuming the acquisition of Wilson Jones, 1961-62 profits are estimated at \$2.25-\$2.50 a share. Growth will probably slow down somewhat from the 32.4% compounded since 1955, but should continue well above 10%. Dividends on the publicly held Class A are \$1 a share. The company's financial position is the best in its history. No financing is foreseen. A secondary offering, recently deferred, will probably take place shortly to obtain sufficient round lot shareholders for listing on the NYSE. *With the stock selling at a modest premium in relation to the S & P 425 stock index, and with the outlook favoring above-average growth, this issue should show gratifying appreciation over the next year.*

A PROGRAM FOR RETIREMENT

Shift in Investment Objective Upon Retirement—Emphasis Should Be Placed on Safety and Income, Rather Than on Capital Gains

Elsewhere in this issue, we direct attention to the investment advantages of growth stocks. As pointed out, carefully selected issues of this type are highly recommended, provided they meet your investment objectives.

Growth stocks are an ideal medium for the investor endeavoring to accumulate an estate or to build a retirement fund. The generally

low current dividend return is subordinated to the possibilities for above-average long-term capital gains.

But what about the person who is approaching retirement age or who has already retired? In these cases, an entirely different investment approach is required. Here the presumption is that the individual wants to invest his principal



to prevent pain and anxiety in angina

For your angina patients, EQUANITRATE helps control pain and angina-triggering anxiety. EQUANITRATE reduces the number and severity of attacks, increases exercise tolerance, and lessens nitroglycerine dependence. Russek[†] reports "The best results . . . in both clinical and electrocardiographic response, were observed with a combination of meprobamate and pentaerythritol tetranitrate [EQUANITRATE] in the patients studied."

For further information on the limitations, administration, and prescribing of EQUANITRATE, see descriptive literature or current direction circular.

[†]Russek, H.I.: Am J. Cardiol. 3:547 (April) 1959.

Supplied: EQUANITRATE 10 (200 mg. meprobamate, 10 mg. pentaerythritol tetranitrate), white oval tablets, vials of 50. EQUANITRATE 20 (200 mg. meprobamate, 20 mg. pentaerythritol tetranitrate), yellow oval tablets, vials of 50.

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Equanitrate®

Meprobamate and Pentaerythritol Tetranitrate, Wyeth

SECURITIES FOR RETIREMENT PORTFOLIO

BONDS

*ISSUE	S. & P. RATING	†CALL PRICE	RECENT PRICE	YIELD TO MAT. %
\$AMER. TEL. & TEL. 4½s, 1998	AAA	103.72 ('71)	103	4.58
\$CONSUMERS POWER 4½s, 1991	AAA	104.17 ('66)	101	4.56
U. S. STEEL 4½s, 1986	AAA	104 ¼	100	4.50
\$NATL. FUEL GAS 4½s, 1986	AA	106.70	103	4.67
UNION OIL 4½s, 1986	AA	104 ¼ ('66)	103	4.66

PREFERRED STOCKS

	SH. EARN. 1960 (\$)	CALL PRICE	RECENT PRICE	YIELD %
CATERPILLAR TRACTOR \$4.20	238.42	101½	93	4.5
CINN. GAS & ELECTRIC \$4	47.44	108	87	4.6
COMMONWEALTH EDISON \$4.64	119.89	106½	101	4.6
GENERAL MILLS \$5	157.94	115	109	4.6
GENERAL MOTORS \$3.75	338.21	103	82	4.6

COMMON STOCKS

	EARN. \$ PER SH. 1960	INDIC. DIVD. \$	RECENT PRICE	YIELD %
AMERICAN CAN	2.06	2.60	44	4.5
BORG-WARNER	3.01	2.60	46	4.3
BOSTON EDISON	4.10	4.20	78	3.8
CONSOLIDATED EDISON	3.88	3.70	80	3.8
FIRST NATL. STORES	4.80	5.25	65	3.8
GENERAL MOTORS	3.35	2.80	48	4.1
LIGGETT & MYERS	6.96	6.75	101	5.0
LORILLARD (P.) CO.	4.07	4.25	63	3.5
MAY DEPT. STORES	3.11	3.35	56	3.9
PACIFIC LIGHTING	3.43	3.10	60	4.0
STANDARD OIL (IND.)	4.05	4.40	47	4.3
STONE & WEBSTER	3.57	3.75	65	4.6
SUNSHINE BISCUITS	6.72	6.55	116	3.8
UNION ELECTRIC	2.17	2.30	49	3.7
UNION PACIFIC	2.73	3.00	35	4.6

*Listed on New York Stock Exchange unless otherwise noted. \$Over the counter. E—Estimated.

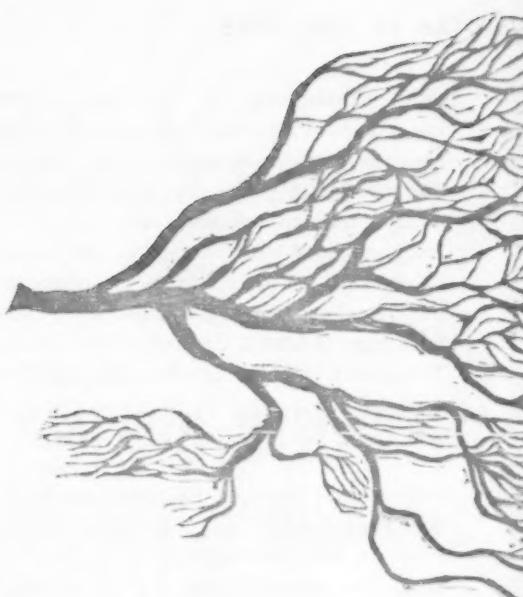
†Year denotes first call date. ‡Incl. cash equivalent of dividend in Standard Oil (N.J.) stock. *Redeemable for sinking fund at 100½. *Year ended May 31, 1961. *Years ended Mar. 31, 1961 and 1962. *Years ended Jan. 31, 1961 and 1962. *Dividends partly tax free. *Incl. extra.

to augment his social security and other retirement benefits. The objective is the highest income return commensurate with safety, rather than long-term capital gain. At the same time, it is advisable to lessen the risk element that previously could be withstood while, the individual had a regular source of earned income.

The securities recommended above are suitable either for the retired person or for the investor seeking a liberal and reasonably assured income. The division of funds can be varied to fit various requirements and income needs, but a reasonable yardstick might be 25% in bonds,

25% in preferred stocks, and 50% in common stocks.

For approximately three years, high-grade bonds and preferred stocks have yielded more than the typical common stock, counter to the usual experience. There is every assurance that interest or dividends, as the case may be, will be paid on these fixed-income securities and that principal on the bonds will be met at maturity. Price fluctuations, governed by the ups and downs in money rates, are usually quite moderate. The chief shortcoming is that, because of their fixed terms, these securities do not provide protection against a further



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HYPERTENSION
PHYSICIANS PRESCRIBE
DIURIL®
CHLOROTHIAZIDE
more often than any other diuretic

"Since the chlorothiazide compares well in effectiveness with other hypotensive drugs, it is our practice to initiate therapy with chlorothiazide alone in all patients with normal renal function. In the absence of signs indicating urgency in the reduction of pressure we find it advisable to continue such treatment for one or two months."

Conway, J., and Lauwers, P.: Circulation 21:21, January, 1960.

Supplied: 250-mg. and 500-mg. scored tablets

DIURIL chlorothiazide in bottles of 100 and 1000.

Before prescribing or administering DIURIL, the physician should consult the detailed information on use accompanying the package or available on request. DIURIL is a trademark of Merck & Co., INC.



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West Point, Pa.



EFFECTIVE MANAGEMENT OF HYPERTENSION BEGINS WITH DIURIL

reduction in the purchasing power of the dollar.

As a rule, well-chosen common stocks provide this safeguard, but are subject to wider intermediate price movements. As the economy grows—and likewise corporate earnings—such issues usually appreciate sufficiently in value to compensate for inflation, accompanied by increased dividend payments.

The person approaching retirement does not

necessarily have to make an immediate large-scale switch of holdings. This can be accomplished in an orderly manner by directing initial efforts toward the weeding out of overly speculative or otherwise undesirable holdings. It may well be that some of the securities held already qualify and can be used as the nucleus for a program conforming to your changed investment objectives.

RAPID GROWTH STOCKS IN THE NEWS

ADDRESSOGRAPH-MULTIGRAPH will pay a 2% stock dividend November 3. . . . FOUR STAR TELEVISION is acquiring Materto Productions, a Hollywood television show producer for over \$1 million cash, from internally generated funds, and has also entered the field of live TV production through acquisition of Heatter-Quigley Enterprises. . . . GENERAL BATTERY & CERAMIC is planning a new Ohio plant to serve the midwestern market, with construction to begin in 1962. . . . A tentative agreement has been reached for merger of H. W. LAY with Frito Co., involving an exchange of 1.65 shares of the latter's stock for each share of Lay, with the new company to be known as Frito-Lay. The move is subject to later approval of directors and stockholders. Prices of the two stocks are about in line on the basis of the proposal.

Stockholders of NATIONAL VIDEO voted on a 2-for-1 split of the Class A and B shares. Class A dividends will be \$0.12½ quarterly, corresponding to the recently increased \$0.25 rate

on the existing stock. . . . LITTON INDUSTRIES has acquired Cole Steel Equipment Co., maker of office furniture, as a division of its business machines group. Cole's sales have been running at an annual rate of about \$20 million. . . . Stockholders of MANPOWER, INC. will be asked to approve a 3-for-2 split of the common at the annual meeting on November 8. . . . Plans for merger of LIFE & CASUALTY INSURANCE OF TENNESSEE and Gulf Life Insurance have been dropped.

SPEEDRY CHEMICAL PRODUCTS on September 5 announced the acquisition of Gloco Products, Inc., its distributor in the New York area. The acquisition was for an undisclosed amount of stock and cash. . . . STANDARD BRANDS PAINT CO. shares were listed on the American Stock Exchange as of September 6. . . . STOP & SHOP has declared a stock dividend of 3%, payable Nov. 1.

STEELS SEEN OVERCOMING WAGE BOOST

Any Price Boosts Will Be Minor—But Rising Demand and Higher Productivity Make for Impressive Near-Term Profits Prospects

Wages in the steel industry rose by another \$0.13 hourly on October 1. This automatic increase, which adds an estimated \$2-\$2.50 a ton to the cost of making finished steel, brings advances under the current three-year contract with the United Steelworkers to approximately \$6-\$7.50 per ton. Unlike the industry prac-

tice in earlier years of the postwar period, no price increases were effected to offset part of the added costs. In fact, the only major price changes since 1958 have been reductions in reinforcing bars, merchant wire, and pipe (products in which import competition is quite keen), and also several cuts in flat-rolled stain-

"just right" relief from pain ...be it subtle or severe

The need for relief of suffering can be met efficiently and with a high degree of safety with the 'Empirin' family of analgesics...carefully graded to give the proper degree of analgesia for each degree of pain.

'TABLOID'

'EMPIRIN' COMPOUND®

Acetophenetidin gr. 2½
Acetylsalicylic Acid gr. 3½
Caffeine gr. ½



headaches, colds and fever



earaches, dysmenorrhea and neuralgia



minor surgery, postpartum pain and trauma



organic disease, muscle spasm and migraine



fractures, synovitis and bursitis

CODEINE PHOSPHATE — gr. $\frac{1}{8}$ No. 1

CODEINE PHOSPHATE — gr. $\frac{1}{4}$ No. 2

CODEINE PHOSPHATE — gr. $\frac{1}{2}$ No. 3

CODEINE PHOSPHATE — gr. 1 No. 4

*Subject to Federal Narcotic Regulations.
Available on oral prescription where
state law permits.



BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

LEADING STEEL EQUITIES

*ISSUE	EARN. \$ PER SH. 1960	E1961	INDIC. DIVID. \$	1961 PRICE RANGE	APROX. PRICE	#P-E RATIO
ACME STEEL	0.61	0.50	0.40	24½-17	20	40.0
ALLEGHENY LUDLUM	2.25	2.65	2.00	50¼-35	47	17.7
ARMCO STEEL	4.76	4.25	3.00	79¾-67¾	72	16.9
BETHLEHEM STEEL	2.52	2.15	2.40	49¾-39½	42	19.5
CARPENTER STEEL	3.51	1.75	†1.40	52½-39¾	47	26.9
COLORADO FUEL & IRON	d0.41	1.00	Nil	23½-14½	17	17.0
COPPERWELD STEEL	2.08	1.75	2.00	42½-31½	34	19.4
CRUCIBLE STEEL	0.19	0.50	0.80	26¾-17½	21	42.0
GRANITE CITY	2.59	2.25	1.40	52½-35½	45	20.0
INLAND STEEL	2.68	2.90	1.60	49¾-40½	43	14.8
JONES & LAUGHLIN	4.04	4.00	2.50	73½-56½	68	17.0
§KAISER STEEL	d3.49	3.25	Nil	39½-23	34	10.5
§MCLOUTH STEEL	4.51	4.75	Nil	56 -38¾	56	11.8
NATIONAL STEEL	5.53	4.90	3.00	98½-80	88	18.0
REPUBLIC STEEL	3.36	3.50	3.00	65½-53¾	60	17.1
U. S. STEEL	5.16	4.25	3.00	91½-75½	82	19.3
WHEELING STEEL	3.14	2.75	3.00	56 -42%	50	18.2
YOUNGSTOWN SHEET & T. .	7.38	6.50	5.00	114½-88½	101	15.5

*Listed on New York Stock Exchange unless otherwise noted. §Over the counter. E—Estimated.
†Incl. extras. †Based on estimated 1961 earnings. d—Deficit. *Years ended June 30.

less steels. In stainless, which accounts for only 1% of industry tonnage, the presence of many small producers makes for a less orderly market than in the tonnage steels.

Earlier hopes for price increases during the latter months of 1961 have been dimmed by the President's letters to executives of major steel companies requesting the industry to forego higher prices as an anti-inflationary measure.

While steel officials rejected the request, increased competition from imported steel and other materials (notably aluminum, concrete, and plastics), together with the Administration pressure, indicate that any price advances in the near future will be relatively minor and extremely selective.

Nevertheless, profit prospects for steel producers are impressive because of the rising level of demand. Operations over the rest of 1961 and through the first half of 1962 should easily average 75%-80% of capacity as the impetus from higher steel consumption in the automobile, construction, and other industries is enhanced by some rebuilding of inventories following a year and a half of liquidation by steel users.

The need for larger inventories arises from

higher activity in steel consuming industries (a 30-day supply of steel at the levels of economic activity projected for 1962 will be substantially greater than a 30-day supply at the reduced rate of usage prevailing over most of the past year). Moreover, some accumulation of steel is indicated as a hedge against the possibility of another strike in mid-1962, when the present union contract expires.

The favorable earnings outlook for this highly cyclical industry in the face of another wage increase without any significant price improvement reflects the leverage of a higher rate of operations when heavy fixed charges are spread over larger tonnage sales. In addition, benefits from recent sizable expenditures on new and improved plant facilities (designed to increase productivity) should become quite marked with higher output. This pattern was evidenced throughout the postwar period, most recently during the second quarter of 1961, when net profits more than doubled those of the first quarter on a rise in sales of only 20%.

Steel equities have not been stock market favorites in recent months because of added investor concern over increasing competition, reduced control over prices, and rising wage

Increasingly...
the
trend is to

Terramycin®

OXYTETRACYCLINE WITH GLUCOSAMINE

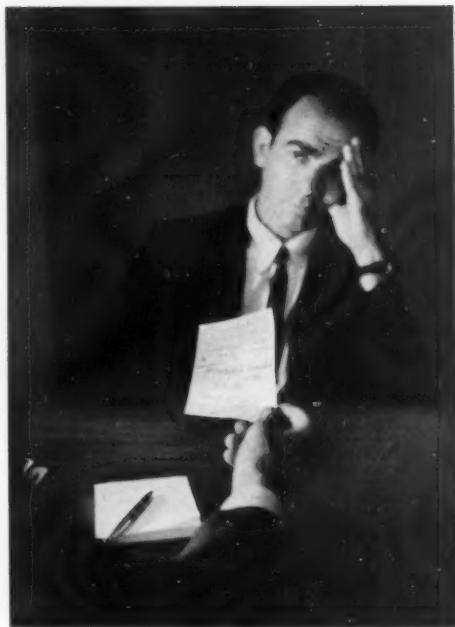
confirmed dependability in sinusitis is just one reason why



According to a recent report* on the effectiveness of Terramycin in 106 cases of upper respiratory tract infection: "The response in sinusitis was particularly gratifying, as both acute and chronic cases were controlled within an average of five days."

"It was the impression of the hospital staff that oxytetracycline [Terramycin] was not only better tolerated, but more effective than other antibiotics habitually used."

The results reported in this and many other studies confirm the vitality of Terramycin for broad-spectrum antibiotic therapy and demonstrate why—increasingly—the trend is to Terramycin.



In brief

The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low order of toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. Aluminum hydroxide gel may decrease antibiotic absorption and is contraindicated.

More detailed professional information available on request.

another reason why the trend is to Terramycin—versatility of dosage form:

TERRAMYCIN Syrup/Pediatric Drops

125 mg. per tsp. and 5 mg. per drop (100 mg./cc.), respectively—deliciously fruit-flavored aqueous forms... preconstituted for ready oral administration

TERRAMYCIN Intramuscular Solution

50 mg./cc. in 10 cc. vials; 100 mg. and 250 mg. in 2 cc. ampules—the broad-spectrum antibiotic for immediate intramuscular injection... conveniently preconstituted... notably well tolerated at injection site with low tissue reaction compared to other broad-spectrum antibiotics

Terramycin®

OXYTETRACYCLINE WITH GLUCOSAMINE

CAPSULES 250 mg. and 125 mg. per capsule

convenient initial or maintenance therapy
in adults and older children

Science for the world's well-being®



PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, N. Y.

*Jacques, A. A., and Fuchs, V. H.: J. Louisiana M. Soc. 113:200, May, 1961.

FOR THE 4 OUT OF 10
PATIENTS WITH NO
DEMONSTRABLE PATHOLOGY[†]
CONSIDER



Monase*



They may come to you only with a complaint of early morning insomnia or headache or loss of weight. By probing, you may elicit other symptoms, such as anorexia, chronic fatigue, apathy, inability to concentrate, moodiness, and disinterest in everyday activities. But if yours is a typical practice, you have probably found that careful examination of such patients often reveals no somatic pathology. Gradually, the pattern of depressive disorders emerges.

While tranquilizers may be indicated in some of these patients, many of them are candidates for the simple psychomotor stimulating effect of Monase. Tests in more than 4,000 patients justify the expectation that Monase will enable many of these patients to sleep better, eat better, and feel better.

†Estimated average in general practice.

*Trademark, Reg. U.S. Pat. Off.—brand of tryptamine acetate

BRIEF BASIC INFORMATION

Description: Monase is tryptamine acetate, a unique non-hydrazine compound, developed in the Research Laboratories of The Upjohn Company.

Indications: Various depressive states: psychoneurotic depressive reactions; psychiatric disorders with prominent depressive symptoms or features; transient situational personality disorders with pathological depressive features; manic-depressive reactions, depressed type; involutional psychotic reactions with depressed features; psychotic depressed reactions.

Dosage: 30 mg. daily in divided doses. Initial benefit may be observed within 2 to 3 days, but maximum results may not be apparent until after 2 or more weeks. Adjustment of dose to individual response should be effected in increments or decrements of 15 mg. daily at weekly intervals. The daily maintenance dose ranges between 15 and 45 mg. In schizophrenics, 30 mg. daily may be useful as an adjunct in activating these patients or brightening their mood.

Contraindications and Precautions: There are no known absolute contraindications to Monase therapy. However, the drug should be used with caution in schizoid or schizophrenic patients, paranoid, and in patients with intense anxiety, as it may contribute to the activation of a latent or incipient psychotic process. Patients with suicidal tendencies should be kept under careful observation during Monase therapy until such time as the self-destructive tendencies are brought under control.

Patients who are on concomitant antihypertensive therapy should be watched carefully for possible potentiation of hypotensive effects. Added caution should be employed in patients with cardiovascular disease in view of the occasional occurrence of postural hypotension, and the possibility of increased activity as a result of a feeling of increased well being.

Despite the fact that liver damage or blood dyscrasias have not been reported in patients receiving Monase, as is the case with any new drug, patients should be carefully observed for the development of these com-

plications. Monase should probably not be used in patients with a history of liver disease or abnormal liver function tests. Also, the usual precautions should be employed in patients with impaired renal function, since it is possible that cumulative effects may occur in such patients.

Monase should be employed with caution in patients with epilepsy since the possibility exists that the epileptic state may be aggravated. Also, because of its autonomic effects, therapy with Monase may aggravate glaucoma or may produce urinary retention. Monase must not be administered concomitantly with imipramine. In patients receiving Monase, caution should be employed in administering the following agents or related compounds in view of possible lowering of the margin of safety: meperidine, local anesthetics (procaine, cocaine, etc.), phenylephrine, amphetamine, alcohol, ether, barbiturates or histamine.

Toxicity and Side Effects: The side effects observed in patients on Monase therapy, in general, have been mild and easily managed by symptomatic therapy or dose reduction. If such side effects persist or are severe, the drug should be discontinued. Alterations in blood pressure, usually in the form of postural hypotension, or more rarely, an elevation of blood pressure, have been reported. Other side effects include allergic skin reactions and drug fever and those that appear to be dose related since they are more likely to occur when the daily dose exceeds 60 mg. These are nausea and gastrointestinal upset, headache, vertigo, palpitation, dryness of the mouth, blurred vision, over-stimulation of the central nervous system, restlessness, insomnia, paradoxical somnolence and fatigue, muscle weakness, edema, and sweating. Following sudden withdrawal of medication in patients receiving high doses for a prolonged period, there may occur a "rebound" withdrawal effect which is characterized by headache, central nervous system hyperstimulation and occasionally hallucinations.

Supplied: Monase, compressed tablets, 15 mg., in bottles of 100 and 500.

Upjohn

75th year

costs. The industry's problems in these respects, however, are no greater (in some cases less) than the same problems confronting other basic industries such as oils, chemicals, aluminum and metal fabricating.

Moreover, steel companies generally have the financial resources to help solve these problems by effective application of current and future capital expenditures. Outlays will doubtless be concentrated on new processing facilities (the oxygen converter furnace is an outstanding example), improving output in present open hearths with oxygen lances, and generally increasing output per man-hour

through higher yields and more efficient rolling mills.

NATIONAL STEEL and McLOUTH, low-cost producers with major participation in the automobile market, are regarded as the most attractive quality issues in the group, both on prospective 1962 earnings and for long-pull purposes. GRANITE CITY is also suitable on a semi-investment basis. Among the low-priced speculative issues, ACME, CRUCIBLE and COLORADO FUEL & IRON have appeal for cyclical recovery, especially in view of the added earnings contribution to be expected from sizable new plant facilities.

FROM COAST TO COAST



Latest indications are that WESTINGHOUSE ELECTRIC will barely earn its \$1.20 dividend this year, mainly reflecting poor pricing in most of the general industrial product category. However, the present rate is likely to be continued, in view of the company's excellent financial position. Profits in 1960 were equal to \$2.22 a share. . . . Sales of NATIONAL ACME will be slightly lower this year, while margins are reflecting a cost-price squeeze. Earnings will be substantially below last year's \$3.55 a

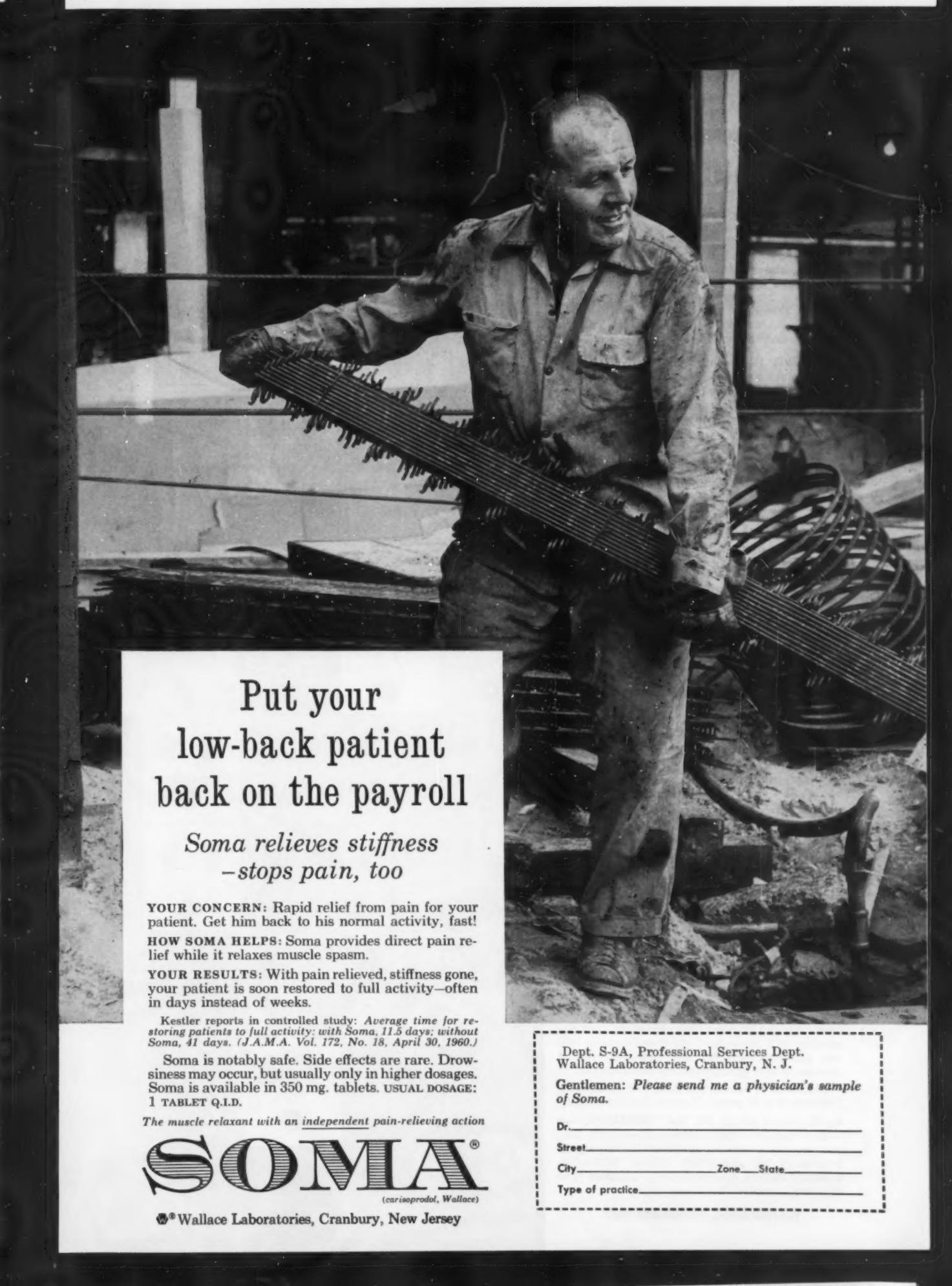
share, but incoming orders, particularly from foreign sources, suggest improvement in 1962. . . . FRAM CORP. is obtaining a larger share of the original equipment automotive business than formerly. It is also endeavoring to expand operations into the broadening field of industrial filter uses, as well as in aviation and missile applications. Despite a poor first quarter, this year's earnings should be in line with the \$2.13 a share of 1960.

Second-half results of CROMPTON & KNOWLES will not match the excellent showing made in the first six months. Profits for the full year are placed at \$2.25-\$2.50 a share against \$2.61 in 1960. Prospects for 1962 are brightened by indications that the textile industry is getting ready for another round of machinery buying. . . . AEROVOX CORP., which has a spotty sales and earnings record, now appears to be on the upbeat. Substantial gains are indicated for 1961, with all the gain coming in the final half. Net of about \$0.50 a share seems attainable, up from last year's \$0.14.

GENERAL DEVELOPMENT BUYS NEW TRACT

Exercising its option, GENERAL DEVELOPMENT has acquired, at a cost of \$16.5 million, 43,000 acres in the Cape Canaveral area contiguous with its Port Malabar development.

The latter, covering 2,400 acres, includes nearly 300 homes and an industrial park. Expansion of the Cape complex, according to the NASA, will mean 20,000 new space age jobs in the



Put your low-back patient back on the payroll

*Soma relieves stiffness
—stops pain, too*

YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, fast!

HOW SOMA HELPS: Soma provides direct pain relief while it relaxes muscle spasm.

YOUR RESULTS: With pain relieved, stiffness gone, your patient is soon restored to full activity—often in days instead of weeks.

Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days.* (J.A.M.A. Vol. 172, No. 18, April 30, 1960.)

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. **USUAL DOSAGE:** 1 TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

SOMA[®]

(carisoprodol, Wallace)

© Wallace Laboratories, Cranbury, New Jersey

Dept. S-9A, Professional Services Dept.
Wallace Laboratories, Cranbury, N. J.

Gentlemen: Please send me a physician's sample
of Soma.

Dr. _____

Street _____

City _____ Zone _____ State _____

Type of practice _____

THERAPEUTIC INDEX

"Thiosulfil" Forte 0.5 Gm. Tablet

BRAND OF SULFAMETHIZOLE

"THIOSULFIL" has been found effective against the following urinary pathogens: *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Streptococcus fecalis*, *Escherichia intermedium*, and *Aerobacter aerogenes*. In individual cases, sensitivity of the organisms may vary. Sensitivity tests, preferably by the tube dilution method, should be done first, for guidance as to alternate therapy in case "THIOSULFIL" FORTE does not control the infection.

INDICATIONS: Treatment of cystitis, urethritis, pyelitis, pyelonephritis, and prostatitis due to bacterial infection amenable to sulfonamide therapy; prior to and following genitourinary surgery and instrumentation; prophylactically, in patients with indwelling catheters, ureterostomies, urinary stasis, and cord bladders.

SUGGESTED RANGE OF DOSAGE: Adults: 1 or 2 tablets (0.5 Gm.-1.0 Gm.) three or four times daily.

WARNING: Due to the high solubility in body fluids of "THIOSULFIL" and its acetyl form, the hazards of renal tubule obstruction are minimized. The usual precautions exercised with sulfa drugs generally should, however, be observed. In those rare instances where exanthema, urticaria, nausea, emesis, fever or hematuria, are encountered, administration should be discontinued.

CONTRAINDICATION: A history of sulfonamide sensitivity.

SUPPLIED: NO. 786—"THIOSULFIL" FORTE—Each tablet contains sulfamethizole 0.5 Gm. (scored), in bottles of 100 and 1,000.

ALSO AVAILABLE—NO. 785: "THIOSULFIL"—Each tablet contains sulfamethizole 0.25 Gm. (scored), in bottles of 100 and 1,000. **No. 914—**"THIOSULFIL" Suspension—Each 5 cc. (teaspoonful) contains sulfamethizole 0.25 Gm., in bottles of 4 and 16 fluidounces.

SUGGESTED DOSAGES: Adults: 0.5 Gm. four times daily. Infants: (Up to 20 lb.) 25 to 30 mg. per pound per day in four divided doses. Children: (20 to 50 lb.) up to 150 mg. four times daily; (50 to 75 lb.) up to 300 mg. four times daily; (over 75 lb.) adult dose.

WHEN ANALGESIA IS DESIRED

"THIOSULFIL"-A FORTE NO. 783:

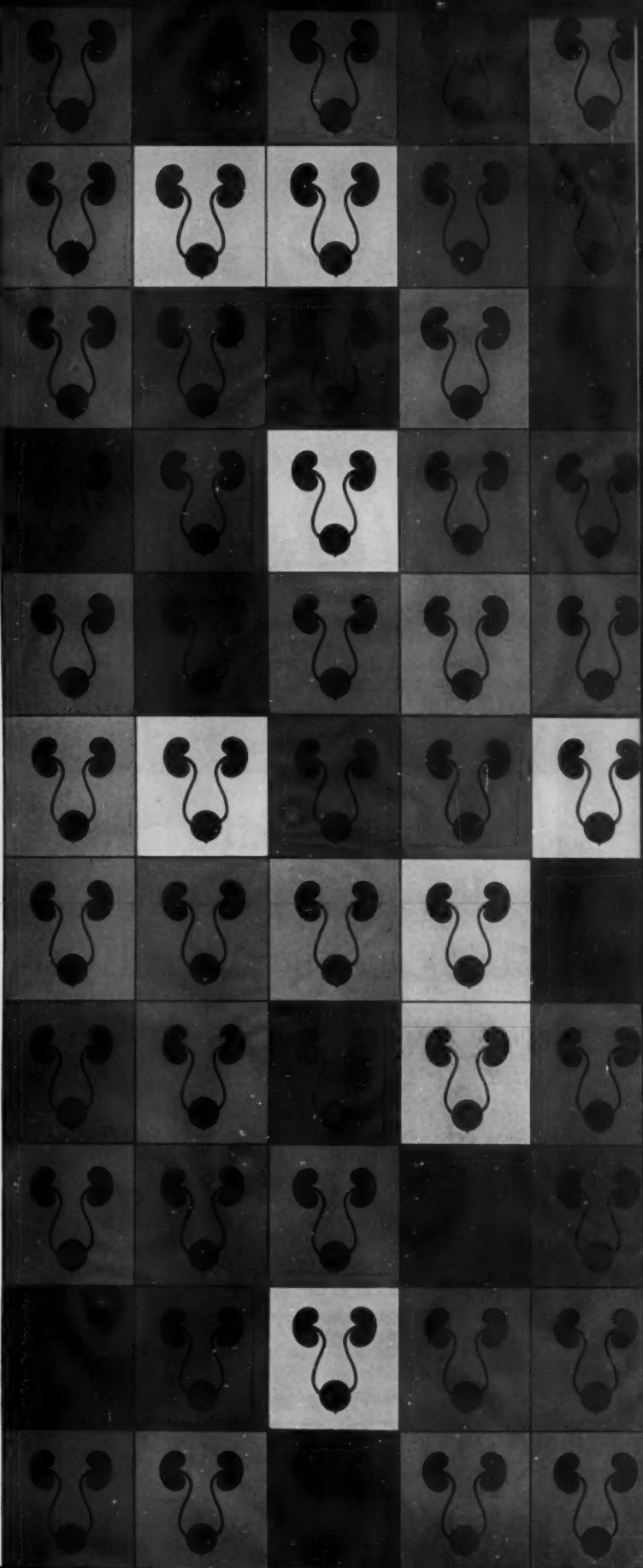
Each tablet contains sulfamethizole 0.5 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000.

CONTRAINDICATIONS: (1) a history of sulfonamide sensitivity and (2) due to the phenylazo-diamino-pyridine HCl component, renal and hepatic failure, glomerulonephritis, and pyelonephritis of pregnancy with gastrointestinal disturbances.

USUAL DOSAGE: Adults: 2 tablets, four times daily. Children (9 to 12 years): 1 tablet, four times daily.

ALSO AVAILABLE: NO. 784 "THIOSULFIL"—A—Each tablet contains sulfamethizole 0.25 Gm., and phenylazo-diamino-pyridine HCl 50.0 mg., in bottles of 100 and 1,000. **USUAL DOSAGE:** Adults: 2 tablets, four times daily. Children (9 to 12 years): 1 tablet, four times daily.

For references, see opposite page.



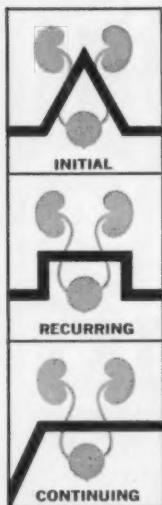
SAFELY MANAGES ALL EPISODES OF URINARY TRACT INFECTION

"Thiosulfil" Forte 0.5 Gm. Tablet (BRAND OF SULFAMETHIZOLE)

THE ONE SULFONAMIDE THAT OFFERS

- Maximum urinary concentration of active, free sulfa at site of infection
- Rapid clearance (noncumulative)
- Rare incidence of side effects
- High degree of clinical effectiveness

"Thiosulfil" dosage schedules reported in the literature.



INITIAL EPISODE (Acute Infection) 3 Gm./day¹

Based on 7 years' clinical experience in treating 3,057 cases of upper and lower urinary tract infection, Bourque¹ found 3 Gm./day for 2 weeks (the average dosage employed in 97 per cent of patients) effective in most cases.

RECURRING EPISODE (Flare-up) 3 Gm./day¹

Same dosage as above. When longer therapy is required as in cases where there is stasis due to obstruction, administration may be continued at a lower dosage range.

CONTINUING EPISODE (Stasis/Obstruction) 2 Gm./day^{2,3} 0.5 Gm./day⁴

Where infection remains latent due to causes which cannot be eliminated as in paraplegia, patients have been maintained symptom-free on dosage regimens ranging from 2 Gm. to 0.5 Gm./day. After initial control of acute symptoms, therapy may be continued indefinitely on a low dosage basis to guard against recurrence and prevent ascending infection. Many cases can be controlled with as little as 0.5 Gm./day.

SUPPLIED: No. 786 — "Thiosulfil" Forte — Each tablet contains sulfamethizole 0.5 Gm. (scored), in bottles of 100 and 1,000.

ALSO AVAILABLE — In urinary tract infection—to alleviate pain and control the infection: No. 783 — "THIOSULFIL"®-A FORTE combines the sulfonamide specific for urinary tract infection with a potent analgesic for prompt, soothing relief of local discomfort. Each tablet contains sulfamethizole 0.5 Gm. and phenylazo-diamino-pyridine HCl 50 mg., in bottles of 100 and 1,000 tablets.

References: 1. Bourque, J.-P., and Gauthier, G.-E.: L'Union Medicale 89:840 (May) 1960. 2. Cottrill, T. L. C., Rolnick, D., and Lloyd, F. A.: Rocky Mountain M. J. 58:68 (Mar.) 1959. 3. Bourque, J.-P., and Joyal, J.: Canad. M.A.J. 68:337 (Apr.) 1953. 4. Hughes, J., Copridge, W. M., and Roberts, L. C.: North Carolina M. J. 17:320 (July) 1956.



Ayerst Laboratories

New York, N. Y. • Montreal, Canada

6136

area and many times that number of supporting retail, service, and other lines of employment. Port Malabar, located 15 miles from Patrick Air Force Base and 30 miles from Cape Canaveral, already houses employees of

both these installations, and the company expects to get a good portion of the incoming personnel to settle at Port Malabar. *Recently priced at 15 (A.S.E.), the shares are still believed to offer promising long range potentials.*

NAFIS POSITION STRENGTHENED

NAFI'S CORP. should report a nominal profit for the seasonally-poor third quarter, compared with a deficit of \$0.20 a share in the corresponding period of 1960. For 1961 as a whole, earnings are expected to rise to \$2 or more a share from \$1.42 last year, reflecting the inclusion of Chris-Craft for the entire year. Monthly sales of Chris-Craft, the largest factor in the motor boat field, are now close to last year's levels. Higher profits are anticipated for 1962. The recent agreement by the former stockholders of Chris-Craft to exchange

\$3,000,000 of their \$18,000,000 short-term notes for about 100,000 shares of NAFI and the successful completion of current negotiations to refinance the \$15,000,000 balance with 17-year notes would strengthen finances materially and could lead to the resumption of cash dividends.

At the recent price of 26 (N.Y.S.E.), NAFI is selling for about 14 times estimated 1961 earnings, a reasonable valuation for the stock of a company operating primarily in the leisure time field.

MEDIUM-PRICED BLUE CHIPS

Stock Splits Have Placed These Sound-Quality Issues in Moderate Price Range—Regarded as Excellent Long-Term Investments

Once something only the wealthy could afford, blue chip stocks are now well within the reach of the average investor. The distinguishing characteristic is quality, rather than the price tag of \$100 or more that used to be popularly associated with such issues. Far-sighted managements have used stock splits or stock dividends to bring prices down, thus broadening the market. They reason that the more shareholders there are, the more champions a company will have. Moreover, stock

splits are an important means of giving official recognition to long-term growth.

Since high price is no longer a criterion, the term "blue chip" now refers to stocks with above-average investment attributes, commanding a high degree of popular esteem or preference for this purpose. Typical of virtually all blue chip companies is their dominant position and their underlying strength.

The seven stocks selected herewith, all selling around or under 60, would make an excel-

A \$4500 BLUE CHIP PORTFOLIO

	APPROX. COST	INCOME	APPROX. YIELD
15 shs. CORN PRODUCTS	\$795	\$18.00	2.3%
10 shs. GREAT ATL. & PAC.	560	14.00	2.5
10 shs. MANUFACTURERS HANOVER ...	580	20.00	3.4
10 shs. MAY DEPT. STORES	570	22.00	3.9
10 shs. PACIFIC LIGHTING	600	24.00	4.0
20 shs. PHILADELPHIA ELEC.	680	24.00	3.5
10 shs. RELIANCE INSURANCE	630	22.00	3.5
	<hr/> \$4,415	<hr/> \$144.00	<hr/> 3.1%

THE BENEFITS OF
SUSTAINED RELEASE IRON
PLUS A FECAL SOFTENER

NEW
FERRO-
SEQUELS

SUSTAINED RELEASE IRON CAPSULES LEDERLE

TO MEET
THE SPECIAL NEEDS
OF PREGNANCY

A rational approach to the increased iron needs and increased G.I. sensitivity of pregnant patients. Sustained timed action releases iron in the area of optimal uptake—

primarily in the duodenum-jejunum, and some in the ileum. The possibility of G.I. irritation is reduced because ferrous fumarate is a better tolerated form of iron, and because the concentration of iron is never unduly high at any point. FERRO-SEQUELS also contain dioctyl sodium sulfosuccinate which helps soften stools for easier elimination.

Each two-tone, green FERRO-SEQUELS contains:

Ferrous fumarate (equivalent to 50 mg. elemental iron) 150 mg.
Dioctyl sodium sulfosuccinate 100 mg.

Dosage: 1 or 2 SEQUELS daily. Supplied: Bottle of 30.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

about
Mr. F's
chronic headache

no
demonstrable
pathology

Case for
Upjohn's
new psychomotor
Stimulant?
? ?

FOR COMPLETE DETAILS ON

Monase

*Trademark, Reg. U.S. Pat. Off.—brand of tryptamine acetate

Upjohn

75th year

SEE PAGE 161A



lent portfolio for the average investor or they can be used as the framework around which to build more extensive lists. Adequate diversification is provided. Note in the table how investments made in 1953 would have grown both in terms of shares owned and market value; also, how earnings and dividends have increased.

The \$154 annual income provided by the sample \$5,000 portfolio would be equal to a yield of 3.1%, somewhat larger than the current average for common stocks. The commitment in each issue can be varied, of course, to fit other investment objectives. These issues are also well suited for accumulation over the long term under a dollar cost averaging program.

- CORN PRODUCTS is the leading corn refiner in the world and one of the largest food processors. It continues to regard overseas markets as a fertile area for future growth. Operations outside the United States and Canada already account for 36% of total consolidated sales and 41% of over-all profits. With the standard of living in foreign countries rising at a faster pace than in the U.S., the company looks for foreign business to contribute half of consolidated profits in the relatively near future, despite the rapid tempo of domestic growth. The company's development work in dehydrated foods indicates they could become an important segment of its operations, especially in foreign markets. Sales for 1961 are expected to reach a new peak of around \$725 million and earnings are estimated at \$1.80 a share, compared with \$1.74 in 1960, the latter adjusted for the 2-for-1 split in May 1961. Dividends of \$0.30 quarterly are secure. *The shares are attractive for conservative long-term investment.*

- GREAT ATLANTIC & PACIFIC TEA Co. is the largest of all merchandising firms, with sales of around \$5.3 billion. Some 4,350 food markets, of which about two-thirds are in the Middle Atlantic and East Central States, are supported by substantial distribution and manufacturing plants; own manufactured products account for about 11% of sales. Household



"I don't have enough will power to control my appetite."

"My doctor says I don't burn up calories fast enough."

"I simply can't stand hunger pangs."

"Every time I diet, I get constipated."

"I can't sleep when I take medication that really works."

"I take the morning pill but often forget the rest."

IN OBESITY, ONE PHANTOS CAPSULE DAILY

Helps you end all 6 common 'complaints' of dieting patients!

A single convenient Phantos Capsule gives "round-the-clock" action in three timed phases, each a complete formula, tailored to the patient's needs at that time of day.

- ▶ Suppresses appetite, elevates mood.
- ▶ Boosts metabolism, counteracts possible subclinical hypometabolic deficiency.
- ▶ Alleviates hunger spasms.
- ▶ Provides gentle morning laxation.
- ▶ Offsets evening excitation; promotes sound sleep.

	IMMEDIATE RELEASE	INTERMEDIATE RELEASE	FINAL RELEASE
Amphetamine sulfate	..... 5 mg.	..... 5 mg.	..... 5 mg.
Thyroid	..... ½ gr.	..... ½ gr.	..... ½ gr.
Atropine sulfate	..... 1/360 gr.	..... 1/360 gr.	.....
Aloin	..... ¼ gr.	.....	Phenobarbital* ¼ gr.

Phantos-10 is $\frac{2}{3}$ strength of above Phantos formula, for management on lower dosage. Phantos can be prescribed for virtually all overweight patients (observe usual precautions in cardiovascular disease, hypertension, hyperthyroidism). *Phenobarbital may be habit forming. SUPPLIED: Phantos: 30, 250 and 500 capsules. Phantos-10: 30 and 250 capsules. Samples and literature upon request.

Phantos® Day-Long Action Capsules



COOPER, TINSLEY LABORATORIES, INC. Harrison, New Jersey

items and other non-food products have been added to larger stores in recent years; in the five years through early 1961 about 1,100 new stores were opened. Earnings have more than doubled since the early 1950's on rising sales and wider profit margins in recent years. For the fiscal year ending February, 1962, net could exceed \$2.65 a share, and the \$0.30 quarterly dividend may again be supplemented by a year-end extra in cash and stock. In addition to recent reports of negotiations with various discount houses, the company is indicated to be testing such diversified operations as laundry and dry cleaning units, and automobile and tire accessories stores. *The stock is fairly priced and offers interesting long-pull potentials based on possible new ventures.*

● **MANUFACTURERS HANOVER TRUST** should, over the years ahead, reap the benefits of enhanced opportunities provided by the merger a month ago. The merger was an ideal union of two complementary operations, joining together the extensive consumer business of Manufacturers Trust with Hanover's well-developed corporate accounts and trust activities. In view of the enlarged resources, and with cost savings likely to be realized, prospects are favorably regarded. Net operating earnings this year probably will be about 5% under the pro forma \$3.80 a share of 1960, but a good gain is expected in 1962. *Yielding 3.4% from the \$0.50 quarterly dividend, the shares are recommended for investment accounts seeking income combined with long-term appreciation.*

● **MAY DEPARTMENT STORES** is one of the major companies in its field, with 12 major stores and 38 branches; the latter account for about 46% of total sales. Substantial expansion of facilities during the 1950's, when branch space was increased from 1,100,000 square feet to 5,600,000, accelerated sales growth in recent years. By early 1962, branch stores will have 6,771,000 square feet of space and main stores will have 7,571,000, a rise of 21% over early 1959. In 1957, some 50% of sales was derived in the Pittsburgh, Youngstown, Cleveland and Akron areas, but this will soon be

down to 30% as a result of new outlets in the Washington, D.C. area, Denver, Jacksonville, Fla. and Los Angeles. A major expansion program projected through 1964, mostly in new growth areas, is being broadened to include discount stores. Earnings for the fiscal year ending January, 1962 may approximate \$3.35 a share, and the \$0.55 quarterly dividend is secure. *The stock is attractive for longer-term gains as benefits accrue from substantial expansion in recent years and the current aggressive program.*

● **PACIFIC LIGHTING**—The southern California service area of this natural gas distributing system is far outpacing the country in population gains. A load growth of between 80,000 and 100,000 new customers annually is projected for several years ahead. Mainly because of an unusually mild winter, earnings for 1961 have been indicated at around \$3.10 a common share, down from \$3.43 a year before, when a more favorable heating weather pattern prevailed. Assuming more normal heating degree days, a good recovery in earnings is looked for in 1962, and dividends should continue at a minimum of \$0.60 quarterly. Southern California Edison, the principal customer for interruptible gas, has arranged for an independent gas supply from south Texas to be piped across Mexico into California. A U. S. Supreme Court ruling in the Consolidated Edison case upheld the authority of the Federal Power Commission to regulate the end use of gas piped interstate and also over the purchase and cost of such gas from independent producers. This ruling could affect the competitive SoCalEd proposal. *The shares are attractive for income and longer-range growth.*

● **PHILADELPHIA ELECTRIC** supplies electricity and gas service to a rapidly expanding residential and highly diversified industrial area in southeastern Pennsylvania, including Philadelphia. In keeping with the steady development of the Delaware Valley area, the company's revenues and earnings should continue in an upward trend for some time ahead. For 1961, profits are projected at around \$1.55 a



asthmatic...but symptom-free

THE TEDRAL PATIENT lives normally, breathes freely, without fear or embarrassment of asthma attacks.

ONE TEDRAL TABLET taken at the *first* sign of an attack relieves congestion and constriction within fifteen minutes and protects for as long as four hours. For prophylaxis or when attacks are frequent, prescribe one or two tablets q.4h. For children 6 to 12 years old, half the dosage.

Each scored Tedral tablet contains theophylline 130 mg., ephedrine HCl 24 mg. and phenobarbital 8 mg.

*the
dependable
antiasthmatic*

TEDRAL®

Children often prefer the licorice flavor of Tedral Pediatric Suspension

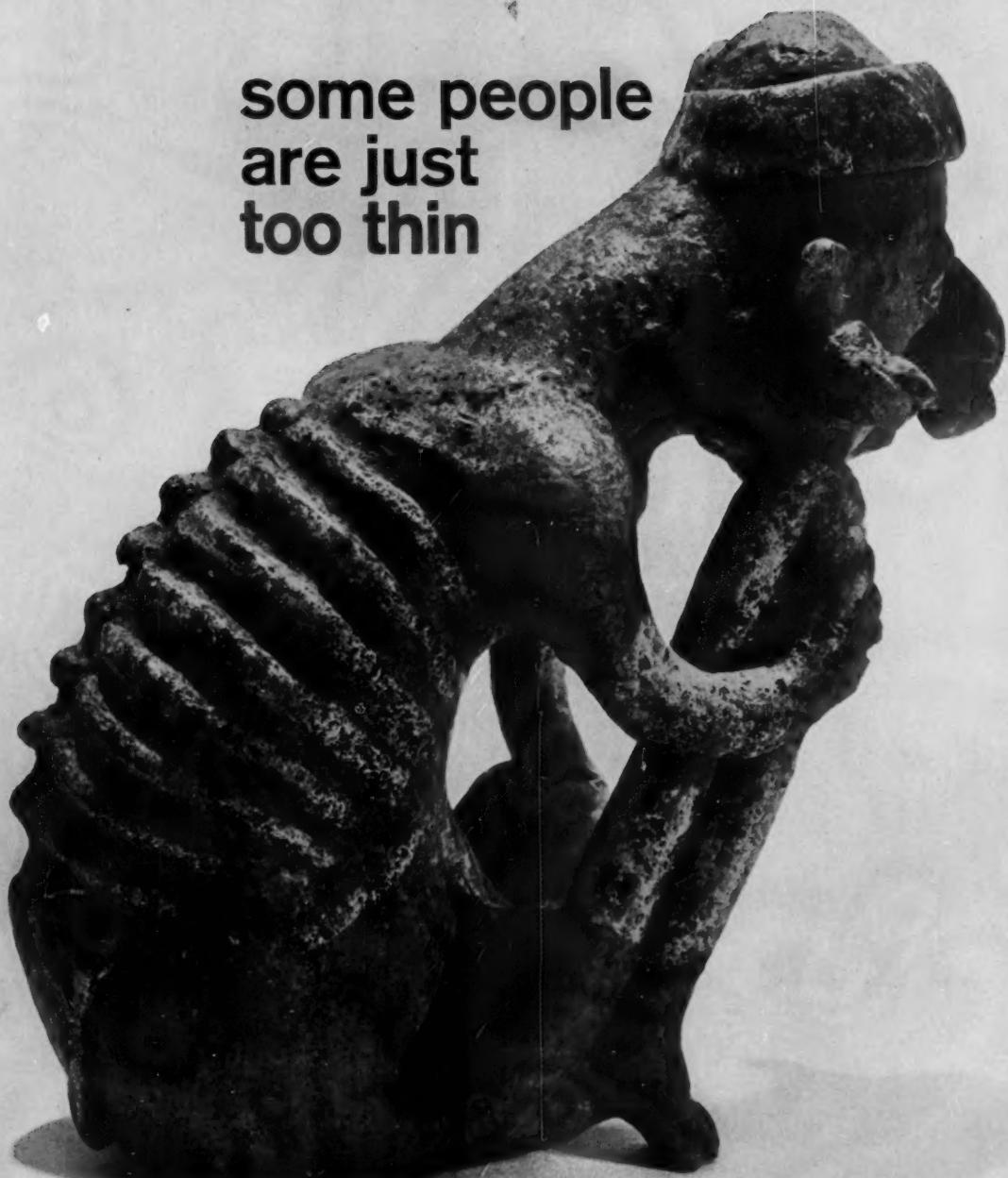
MS12

Makers of CLOSTIL PHOLOID PERITRATE MANDELAMINE



MORRIS PLAINS, N.J.

**some people
are just
too thin**



Effigies of pitifully emaciated people with ribs showing like "corrugated iron," such as this one from Nayarit, are typical of the tendency in primitive Western Mexican art to portray common illnesses and pathological deformations.

Dianabol® adds working weight

Most underweight, debilitated patients show both objective and subjective improvement after anabolic therapy with Dianabol. In the chronically underweight patient, as well as in patients wasted and weakened as a result of aging, chronic or acute illness, trauma, or surgery, Dianabol promotes lean weight gain (averaging 5½ pounds and often exceeding 10 pounds) within several weeks. What's more, by improving weight status and general physical condition, Dianabol renews vigor and revives a sense of well-being in the patient who is **too thin**.

Advantages of Dianabol over other anabolic agents:

- **Dianabol has an unusually favorable anabolic/androgenic ratio.** The anabolic effects of Dianabol occur at dosages which generally preclude androgenic side reactions. In this respect, Dianabol proved superior to 12 other anabolic agents.*
- **Dianabol is economical.** Low in cost, Dianabol is especially suitable for the chronically ill patient who may require long-term therapy.
- **Dianabol is effective orally.** Because it is an oral preparation, Dianabol spares patients the inconvenience and discomfort of parenteral drugs.

SUPPLIED: Tablets, 5 mg. (pink, scored); bottles of 100. For complete information about Dianabol (including dosage, cautions, and side effects), see current Physicians' Desk Reference or write CIBA, Summit, N. J.

*Misurale, F.: Minerva med. 51:996 (March 21) 1960.

Dianabol®
(methandrostenolone CIBA)

2/2000MS

C I B A
Summit, N. J.

STATISTICAL BACKGROUND OF SELECTED ISSUES

*ISSUE	1 SH.	\$1,000 IN INVESTED 1953	AT 1953	EARN. \$ PER SHARE			DIVIDENDS \$			1961 PRICE RANGE	RECENT PRICE	P-E RATIO	YIELD %
				EQUAL TO WORTH	NOW	LOW	PAID SINCE	CURRENT 1953 RATE	1961				
CORN PRODUCTS	6	\$4,823	0.90	1.74	1.80	1.20	1920	0.60	1.20	59% - 45%	53	29.4	2.3
GREAT ATL. & PACIFIC	11.008	3,864	1.46	2.57	2.65	1.40	1925	0.70	1.40	57% - 35%	56	21.1	2.5
MANUFACTURERS HANOVER ..	2	1,972	2.91	3.80	3.60	2.00	1852	1.40	2.00	58% - 45	58	16.1	3.4
MAY DEPT. STORES	1	2,052	2.68	3.11	3.35	2.20	1911	1.80	2.20	58% - 44%	57	17.0	3.8
PACIFIC LIGHTING	2	2,220	2.00	3.43	3.10	2.40	1909	1.62½	2.40	61 - 52	60	19.4	4.0
PHILADELPHIA ELEC.	2	2,380	1.18	1.42	1.55	1.20	1902	0.77½	1.20	34% - 30%	34	21.9	3.5
•RELIANCE INSURANCE	1.235	1,134	6.97	5.60	5.50	2.68	1858	12.20	2.68	70% - 53%	63	11.5	3.5

*Listed on New York Stock Exchange. •American Stock Exchange. E—Estimated. †Plus stock. ‡Based on estimated 1961 earnings.
 'Years ended Feb. 28, 1961 and 1962. *Manufacturers Trust only. ^aPro-forma. *Years ended Jan. 31, 1961 and 1962.

share, as against \$1.42 a year before, despite a sizable drop in credits for interest during construction. Part of the improvement will reflect tax savings stemming from rapid depreciation, which are being included in reported earnings for the first time this year. In 1960, such savings were charged against earnings, and equaled \$0.19 on the present number of shares. Dividends are expected to continue at \$0.30 quarterly. *Considering the reasonable price-earnings ratio and generous yield, the high-grade stock is an attractive commitment for both income and longer-range capital gains.*

● RELIANCE INSURANCE—Partly because of wind and hail storms, earnings for 1961 will bring little cause for enthusiasm, but the year has seen important strengthening in the

company's position. Recent acquisition of Standard Accident Insurance (through a share-for-share exchange), besides resulting in a doubling in business volume, brought in a large casualty business to supplement Reliance's well-established fire writings. The newly-acquired casualty writings have been improving nicely this year, helping to offset effects of storm damage. Adjusted for equity in the increase in unearned premium reserve, about breakeven underwriting results are probable for 1961, while investment income is expected to approximate \$5.50 a share. Given more normal weather conditions, combined earnings stand to show a sharp gain in 1962. Dividends of \$0.55 quarterly probably will be augmented again by a 5% year-end stock extra. *The shares offer exceptionally sound value and should produce worthwhile capital gains.*

EIGHT UTILITY SPLIT CANDIDATES

Selling at Prices Conducive to Splits — Promising Earnings-Dividend Prospects Add to Their Appeal as Long-Pull Investments

Stock splits are becoming increasingly popular with utilities. Thus far in 1961, more than a dozen electric power companies effected splits, and indications are that other announcements will be forthcoming.

Numerous utilities are in a position to take advantage of this market stimulant. For one thing, current prices are at peak levels, with many issues selling well above 50. By split-

ting, these companies have an opportunity to broaden the market for their shares by placing them within reach of a greater number of investors. This is important to utilities because of the necessity of raising equity capital from time to time to assist in financing heavy construction expenditures.

Presented herewith are eight sound utility stocks selling on the New York Stock Ex-

NOVEMBER

1 2 3 4

5 6 7 8 9 10 11



2627282930

TYZINE

BRAND OF TETRAHYDROZOLINE HYDROCHLORIDE (0.05%)
for nasal congestion

"The 'fatigue' phenomenon, in which the nasal congestion no longer responds after frequent use of nose drops over a prolonged period, was not encountered with Tyzine solution, even in patients using it regularly for as long as two weeks."

Menger, H. C.: New York State J. Med. 55:812, 1955.

IN BRIEF

TYZINE is tetrahydrozoline hydrochloride, a sympathomimetic amine with potent decongestant properties. Relief is almost immediate and lasts four to six hours after a single administration. Virtually free of sting or burn and rebound congestion... odorless and tasteless. TYZINE is not significantly absorbed systemically when used as directed... does not impair ciliary activity... and is physiologically buffered to pH 5.5.

INDICATIONS: Relieves inflammatory hyperemia and edema of the nasal mucosa and congestive obstruction of sinus and eustachian ostia, as may occur in the common cold, hay fever, perennial vaso-

motor rhinitis, chronic hypertrophic rhinitis, and sinusitis.

DOSAGE AND ADMINISTRATION: Infants under 2 years - 1 or 2 drops. Children 2 to 6 years - 2 or 3 drops. Instill in each nostril as needed, not more often than every three hours.

SIDE EFFECTS: Transient mild local irritation after instillation has been reported in rare instances.

PRECAUTIONS: Always use the 0.05% pediatric strength for infants and younger children. The 0.1% concentration of TYZINE should be restricted to adults and children 6 years and over. Avoid

doses greater or more frequent than those recommended above. Use with caution in hypertensive and hyperthyroid patients. Overdosage may cause drowsiness, deep sleep, respiratory depression, marked hypotension or even shock in infants and young children. KEEP OUT OF HANDS OF CHILDREN OF ALL AGES.

SUPPLIED: TYZINE Pediatric Nasal Drops, $\frac{1}{2}$ -oz. bottles, 0.05%, with calibrated dropper. Also available: TYZINE Nasal Solution, 1-oz. dropper bottles, 0.1%. TYZINE Nasal Spray, 15 cc., in plastic bottles, 0.1%.

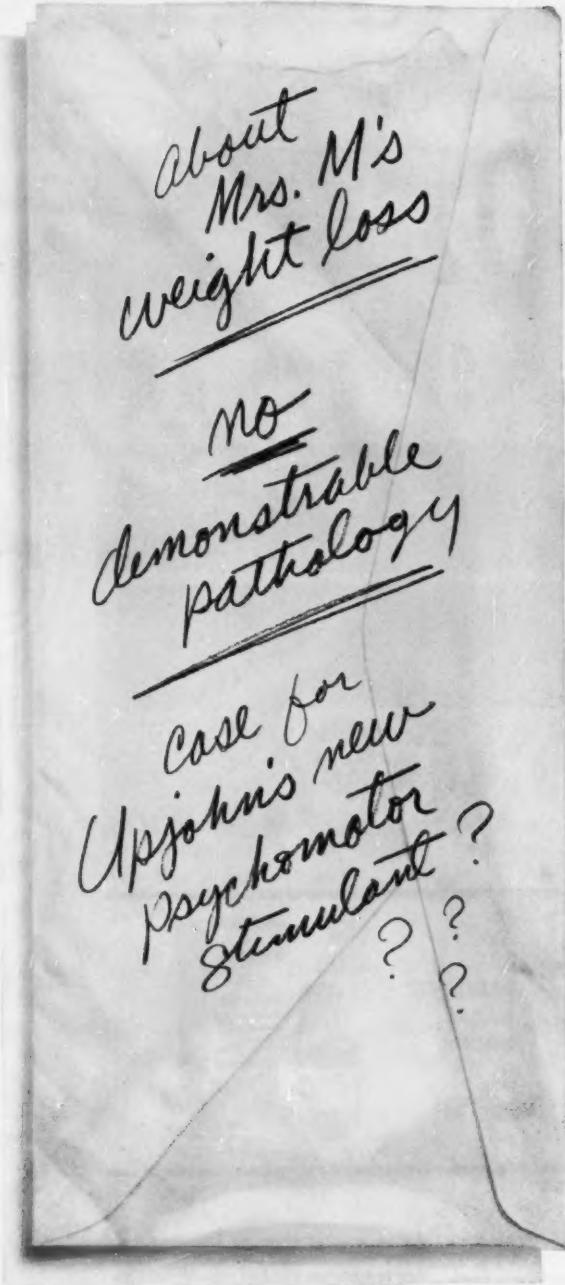
More detailed professional information available on request.

PEDIATRIC NASAL DROPS



Science for the world's well-being® **Pfizer**

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. New York 17, New York



FOR COMPLETE DETAILS ON

Monase*



*Trademark, Reg. U.S. Pat. Off.—brand of tryptamine acetate

Upjohn

75th year

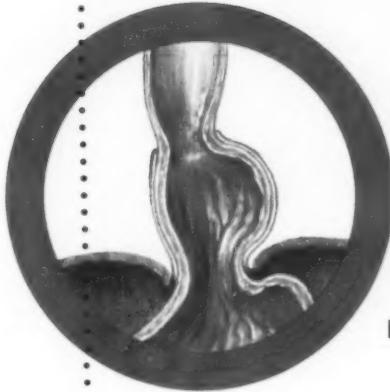
SEE PAGE 161A

change at prices conducive to splits. Each of these companies has promising earnings prospects and would be capable of liberalizing dividends on an equivalent basis following a split. The selected issues have much to commend them on their own merits and should prove rewarding to those willing to take a long-range position.

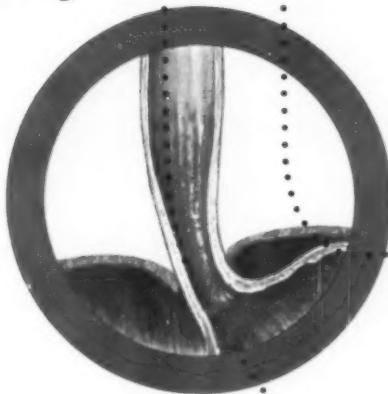
- **CENTRAL ILLINOIS PUBLIC SERVICE** serves both electricity and natural gas in central and southern Illinois, a region that is experiencing rapid industrial expansion. Steady revenue growth and the absence of equity financing during the next five years suggest that share earnings will rise at a good pace. For 1961, profits should be at a minimum of \$3.15 a share, compared with \$3.01 last year. Annual dividends have been liberalized in each of the past four years, and another increase is anticipated early in 1962. It is quite possible that a stock split will also be announced at that time. *In view of the promising outlook for growth in earnings per share, the stock has merit for longer-range capital gains and gradual betterment in income.*

- **COLUMBUS & SOUTHERN OHIO ELECTRIC**—Providing electricity in a diversified and growing area, this company has a promising future. Allowing for recent rate adjustments and for a sharp increase in sales during the second half of the year, earnings for 1961 are projected at \$3.15 a share on the 150,000 additional shares (5.7% dilution) to be outstanding. This would compare with \$2.98 a year before. Profits for 1962 are expected to show substantial improvement. In addition to normal load growth, comparisons will benefit materially from an estimated increase of about \$0.30 a share in credits for interest during construction. The combination of these factors could lift earnings next year to a minimum of \$3.65 a share. This earnings projection is based on the company's present method of making provisions for deferred income taxes to offset savings resulting from the use of rapid depreciation. If Ohio utilities are required to switch to the "flow through" method of recording these tax savings, the company's re-

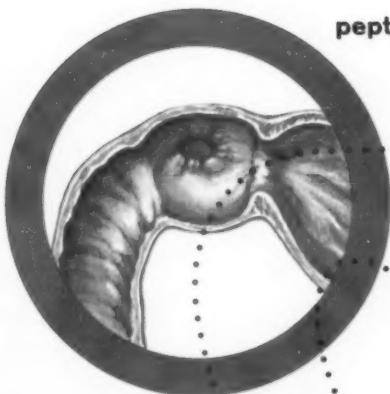
In
gastric disorders:
physician-preferred
agents to
relieve symptoms
and
promote recovery



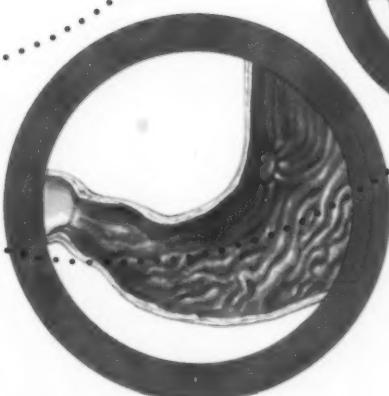
hiatus hernia



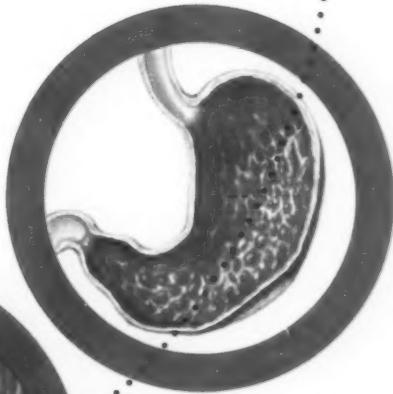
esophagitis



peptic ulcer



gastric ulcer



gastritis



in gastritis
topical anesthetic relieves

gastric discomfort

oxethazaine topically anesthetizes the mucosa in both
the acid stomach and alkaline esophagus

- **new OXAINE M minimizes risk of constipation—**
Palatable and well tolerated OXAINE M promotes good patient cooperation and comfort.

THERAPEUTIC EFFICACY IN CLINICAL TRIALS

In gastritis¹, esophagitis², peptic ulcer^{3,4}, irritable bowel syndrome⁵ and related disorders

Schwartz and Spertus⁶ used oxethazaine in alumina gel for hiatus hernia, esophagitis and gastritis in patients whose conditions were difficult to control without surgical intervention. Oxethazaine in alumina gel (with diet and anticholinergics) was significantly effective in these patients. The authors believe that surgery may often be avoided by the use of OXAINE in these difficult gastrointestinal problems.

OXAINE and OXAINE M were used in a series of patients referred because of lack of success with conventional therapy for complicated gastrointestinal problems. Of 56 patients, good to fair response was reported with OXAINE and OXAINE M. "In all cases there was no lasting improvement until oxethazaine was added to the regimen."⁷ OXAINE and OXAINE M were adjudged useful adjuncts to the medical management of peptic ulcer, gastroduodenitis and esophagitis, hiatus hernia, exaggerated gastrocolic reflex, and achalasia.



OXAINE® M

Oxethazaine in Alumina Gel with Magnesium Hydroxide, Wyeth

OXAINE M is a demulcent, antacid, topical anesthetic. An improved formulation, OXAINE M contains magnesium hydroxide, alumina gel, and oxethazaine for relief of discomfort with minimal possibility of constipation.

Oxethazaine—the potent topical anesthetic in OXAINE M—is 500 times more potent topically than cocaine. Oxethazaine is evenly distributed over the gastric mucosa by the alumina gel vehicle and its action is prolonged. Oxethazaine is stable in gastric contents; its effectiveness and duration of action are almost unaltered despite changes in gastric pH.

Topical application of local anesthetics has been shown to inhibit release of the acid-stimulating hormone, gastrin, from the antrum of the canine stomach. This beneficial action may provide another aid for the control of gastric hypersecretion. Patient cooperation during therapy with OXAINE M is encouraged by pleasant taste and smooth texture of OXAINE M.

References: 1. Deutsch, E., and Christian, H.J.: J. Am. Med. Assoc. 169:2012 (April 25) 1959. 2. Jankelson, I.R., and Jankelson, O.M.: Am. J. Gastroenterol. 32:636 (Nov.) 1959. 3. Moffitt, R.E.: Rhode Island Med. J. 44:151 (March) 1961. 4. Hollander, E.: Am. J. Gastroenterol. 34:613 (Dec.) 1960. 5. Jankelson, O.M., and Jankelson, I.R.: Am. J. Gastroenterol. 32:719 (Dec.) 1959. 6. Schwartz, I.R., and Spertus, I.: Scientific Exhibit, A.A.G.P., Miami Beach, April 16-20, 1961.

For further information on limitations, administration and prescribing of OXAINE and OXAINE M, see descriptive literature or current Direction Circular.

Wyeth Laboratories Philadelphia 1, Pa.

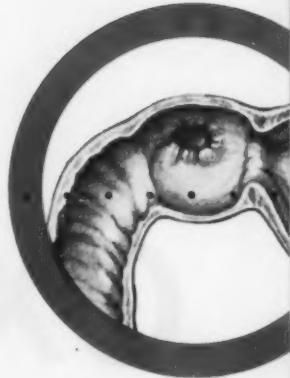
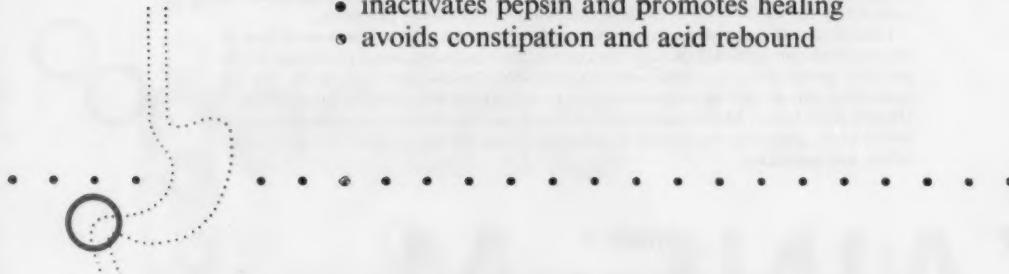


**basic antacid
therapy
for peptic ulcer**

ALUDROX®

Suspension and Tablets:
Aluminum Hydroxide with Magnesium Hydroxide, Wyeth

- relieves pain
- neutralizes gastric acidity in range of pH 3 to 5
- inactivates pepsin and promotes healing
- avoids constipation and acid rebound



**comprehensive
therapy
for peptic ulcer**

three beneficial actions: **antacid**
 sedative
 anticholinergic

ALUDROX® SA

Suspension and Tablets: Aluminum Hydroxide with
Magnesium Hydroxide, Ambutonium Bromide and Butabarbital, Wyeth

- relieves pain
- calms emotional distress
- controls acidity
- inhibits gastric motility
- reduces gastric secretion



After 10 weeks of therapy— a clear skin, a new personality, a new world of fun and laughter

pHisoHex, used as a daily, exclusive wash, enhances any treatment for acne. Because it contains 3 per cent hexachlorophene, it supplies continuous antibacterial action to help combat the infection factor. pHisoHex cleanses better than soap because it is 40 per cent more surface-active. Used together, pHisoHex and new keratolytic pHisoAc Cream provide basic complementary topical therapy for patients with acne—to unplug follicles and to help prevent comedones, pustules and scarring.

New pHisoAc Cream dries, peels and helps degerm the skin; flesh-toned, it tends to hide acne lesions as they heal. pHisoHex, in unbreakable squeeze bottles of 5 oz. and NEW plastic bottles of 1 pint; pHisoAc in 1½ oz. tubes.

pHisoHex and pHisoAc, trademarks reg. U. S. Pat. Off.

CLINICAL PHOTOGRAPHS



Acne vulgaris before treatment

For treatment at home, this patient washed her face daily with pHisoHex and kept pHisoAc on her face twenty-four hours a day.

Nine office treatments consisted of mechanical removal of blackheads and applications of carbon dioxide slush. No other medication was given.



After 10 weeks of therapy

Winthrop LABORATORIES
New York 18, N.Y.

For Acne-pHisoHex® and
antibacterial, nonalkaline, nonirritating,
hypoallergenic detergent

pHisoAc® Cream
keratolytic

POSITION OF STOCKS

*ISSUE	EARN. \$ PER SHARE 1960	E1961	INDIC. DIVID. \$	1961 PRICE RANGE	APPROX. PRICE	YIELD %
CENTRAL ILL. PUB. SERVICE . . .	3.01	3.15	2.12	73½-57½	72	2.9
COLUMBUS & SO. OHIO	2.98	3.15	2.00	66 -50%	66	3.0
CONSUMERS POWER	3.45	3.70	2.60	73½-61½	73	3.6
ILLINOIS POWER	2.92	3.15	2.20	81¼-58	81	2.7
INDIANAPOLIS PWR. & LT. . . .	2.68	2.80	1.90	66½-50	62	3.1
KANSAS CITY PWR. & LT. . . .	3.31	3.45	2.32	75¾-58½	75	3.1
PUB. SVCE. OF COLORADO	3.21	3.75	†2.10	91¾-64½	95	2.2
PUB. SVCE. ELEC. & GAS	2.70	3.10	2.00	60½-43	65	3.1

*Listed on New York Stock Exchange. E—Estimated. †Plus stock.

ported earnings would be increased accordingly. In such event, profits in 1962 would then be in the neighborhood of \$4.10 a share. *Considering the promising earnings outlook for 1962 and the fact that no additional equity financing will be required after this year until 1967 or later, the stock is recommended for new buying. Present prices also suggest the possibility of a split next year, which probably would be followed by at least a 10% increase in the current \$2 annual dividend.*

● **CONSUMERS POWER** — The southern Michigan territory served by this electric-gas utility has a good growth potential. Aided by higher rates in the gas division and the rapid connection of gas space-heating customers, earnings for 1961 should approach \$3.70 a share, as against \$3.45 in 1960. Prospects favor further moderate year-to-year improvement during 1962, which could lead to some increase in the \$2.60 annual dividend. In relation to these earnings, the stock is reasonably priced and currently affords an above-average 3.6% return. The possibility of a split enhances its appeal. *Purchases are recommended for both income and gradual price appreciation.*

● **ILLINOIS POWER**—The northern, central, and southern Illinois territory served by this electric-gas utility has a well-balanced economy. Reflecting steady revenue growth, a sharp drop in the operating ratio and certain rate increases effected three years ago, the company's earnings per share advanced 107% in the six years through 1960. The dividend

record is also highly impressive, with the current \$2.20 annual rate double that in effect in 1954. Earnings are heading for a new peak of around \$3.15 a share this year, as against \$2.92 in 1960, which could foster another dividend increase early in 1962. The shares were split on a 2-for-1 basis in 1957, and another adjustment may be forthcoming. *While the current price-earnings ratio is above average, this good-quality stock has attraction for long-range purposes.*

● **INDIANAPOLIS POWER & LIGHT** provides electricity and, to a minor extent, steam services to one of the principal manufacturing centers of the nation, but the relatively large residential and commercial loads minimize the effects of changing economic conditions on over-all operations. With industrial sales accelerating, earnings for 1961 should be at a minimum of \$2.80 a share, as against \$2.68 a year before. The longer-range outlook is promising, particularly since only \$10,000,000 of debt financing will be required during the five years through 1965 to meet an estimated \$60,000,000 of construction expenditures. This augurs well for good improvement in earnings per share and for periodic dividend increases. *With the current price-earnings ratio only slightly above average and an adequate 3.1% yield available from the \$1.90 annual dividend, the stock is an attractive commitment for income and gradual capital gains. Since the stock was split 2-for-1 in 1954 when prices were well below those presently prevailing, another split may be considered next year.*

now...Rx

Tindal®

Schering

new calming agent with mild sedative effect

acetophenazine dumarate

- helps the cardiac or hypertensive patient slow down to the safer pace you recommend
- controls the agitation and tension that aggravate his condition ■ calms the patient and helps him get to sleep more easily ■ relatively free of side effects^{1,2} ■ low in cost, particularly when long-term or adjunctive therapy is indicated

dosage: Total daily dosage may range from as low as 40 mg. (one 20 mg. tablet twice daily) to as high as 80 mg. daily. Generally, the most effective dosage is 20 mg. t.i.d. In those patients who have difficulty sleeping, the last tablet should be taken one hour before retiring.

supply: TINDAL Tablets, 20 mg., bottles of 100 and 1000.

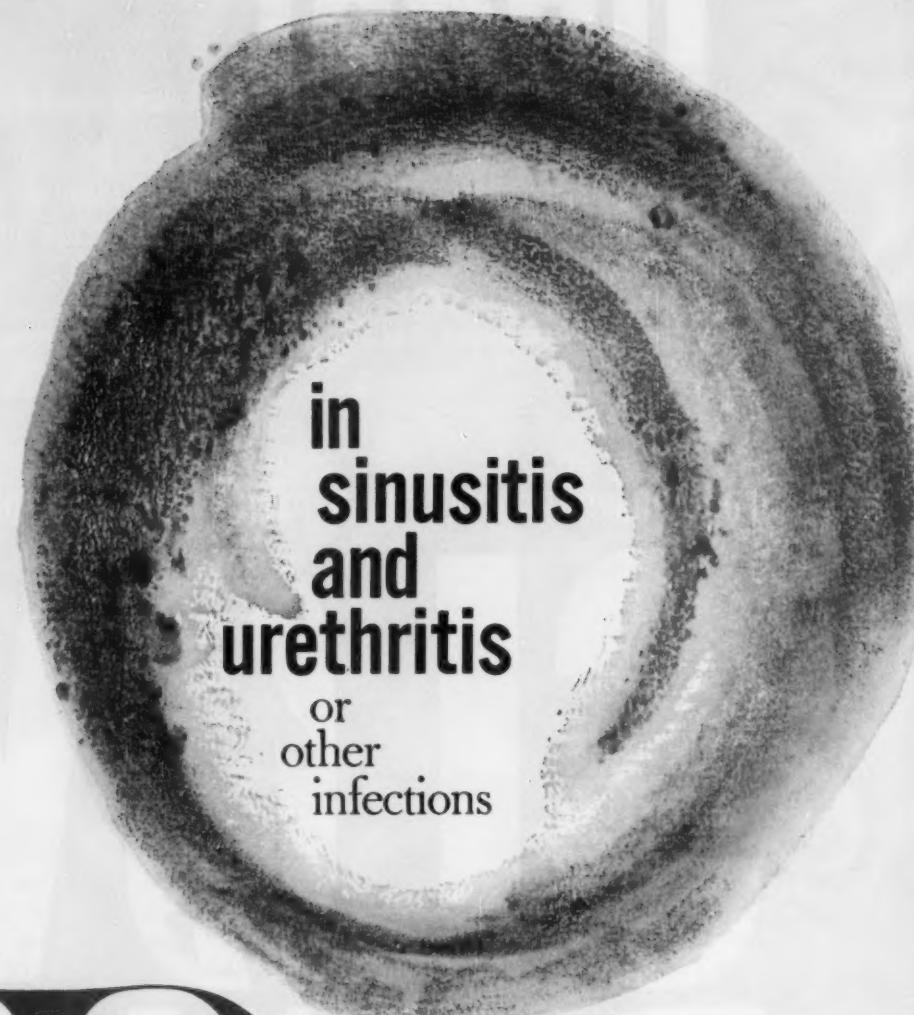
references: (1) Hirscheifer, C: Adjunctive therapy in cardiacs, presented at the Suring Scientific Symposium, Connecticut Acad. Gen. Pract., Hartford, Conn., March 16, 1961. (2) Frühman, I.: P: The Alleviation of Stress in the Elderly Cardiac Patient, *Ibid.* (3) Kent, E. A.: Management of the Hyperactive Geriatric Patient, *Ibid.*

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY

FOR YOUR CARDIOVASCULAR PATIENT...WHEN YOU HAVE TO SAY

**SLOW
DOWN**





in
sinusitis
and
urethritis
or
other
infections

D antibiotic therapy with ECL

CAPSULES, 150 mg., 75 mg. *Dosage:* Average infections—150 mg. four times daily. Severe infections—Initial dose of 300 mg., then 150 mg. every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. *Dosage:* 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into four doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored). *Dosage:* 3 to 6 mg. per pound body weight per day—divided into four doses.

PRECAUTIONS—As with other antibiotics, DECOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECOMYCIN, as with other antibiotics, and demands that the patient be kept under constant observation.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

an added measure of protection

MYCIN[®]

DEMETHYLCHLORTETRACYCLINE LEDERLE

against relapse— up to 6 days' activity on 4 days' dosage

against secondary infection— sustained high activity levels

against "problem" pathogens— positive broad-spectrum antibiosis

● KANSAS CITY POWER & LIGHT operates in a service area that is quite stable and not subject to broad economic fluctuations. Earnings for 1961 are projected at a record \$3.45 a share, up from \$3.31 in 1960. In the period 1962-64, management expects electric sales to grow at a compounded rate of 6.7% annually. This, together with the absence of equity financing during that period, should foster higher earnings and periodic dividend increases.

In relation to current and prospective earnings, the good-quality stock is reasonably priced and affords an adequate yield from the \$2.32 annual dividend.

A good possibility exists that the shares will be split for the first time in the not too distant future.

● PUBLIC SERVICE OF COLORADO provides electricity and natural gas in a territory that should continue to benefit from above-average population growth. Subject to approval of regulatory agencies, the company will acquire Colorado Central Power through an exchange of stock. This neighboring utility serves about 38,469 customers and buys all of its power from Public Service. Aided by the rate increase effected in July, 1960, and by tax savings stemming from rapid depreciation, earnings for

1961 are estimated at \$3.75 a share. This would compare with \$3.21 reported last year. Further moderate improvement is currently indicated for 1962, even allowing for the possible sale of about 10% more stock. *Considering the promising growth potential, the stock is a sound holding for the long-pull investor. It is possible that the shares will be split over the intermediate term, followed by an increase in the \$0.52½ quarterly cash dividend.*

● PUBLIC SERVICE ELECTRIC & GAS serves most of the larger cities in New Jersey in a strategic corridor between New York City and Philadelphia. The broad diversification of industry in this region is a major economic supporting factor. An annual rate of growth of about 7% for the electric business and 11% for the gas division is projected over the next several years, pointing to higher earnings. For 1961, profits are estimated at \$3.10 a share, against \$2.70 a year before, despite the sale of 6.2% more stock last June. With the \$2 annual dividend relatively conservative, some increase in payments is possible. *The stock is a sound issue for income and gradual capital gains. In view of the prevailing price, it is possible that consideration may be given to a stock split.*

UNITED FRUIT TURNING CORNER

Beset by a sequence of reverses that caused earnings to plummet from \$3.82 a share in 1955 to \$0.25 in 1960, United Fruit, under new management, appears to be on the comeback trail. Deterioration of banana prices because of world surpluses has been at the root of the company's troubles, although there were other contributing factors. Sales of bananas to Europe have improved substantially this year, while domestic sales are benefiting from larger volume and the rise in selling prices from the 18-year low in August, 1960. Substantial cost savings have been effected. The company is expanding tropical packaging to provide brand

identification and to lower distribution costs. As this program progresses, extensive advertising, promoting the food value and low calorie aspects of bananas, is planned. Meanwhile, representation has been obtained in the potentially important field of vacuum-freeze food dehydration. With this year's earnings likely to recover to roughly \$1 a share, the \$0.12½ quarterly dividend appears secure. *Although the reattainment of satisfactory profits will take time, the shares, recently at 24 (N.Y.S.E.), can be retained by patient holders on the basis of the moves being made to strengthen the company's position.*

T&A yesterday... throat relief today

After tonsillectomy,
TETRAZETS troches

provide prompt, long-lasting relief of pain and discomfort, along with triple antibiotic effectiveness. The raspberry-flavored troches dissolve slowly. Recommend **TETRAZETS** for pleasant relief of sore or irritated throats, after mouth and throat surgery.

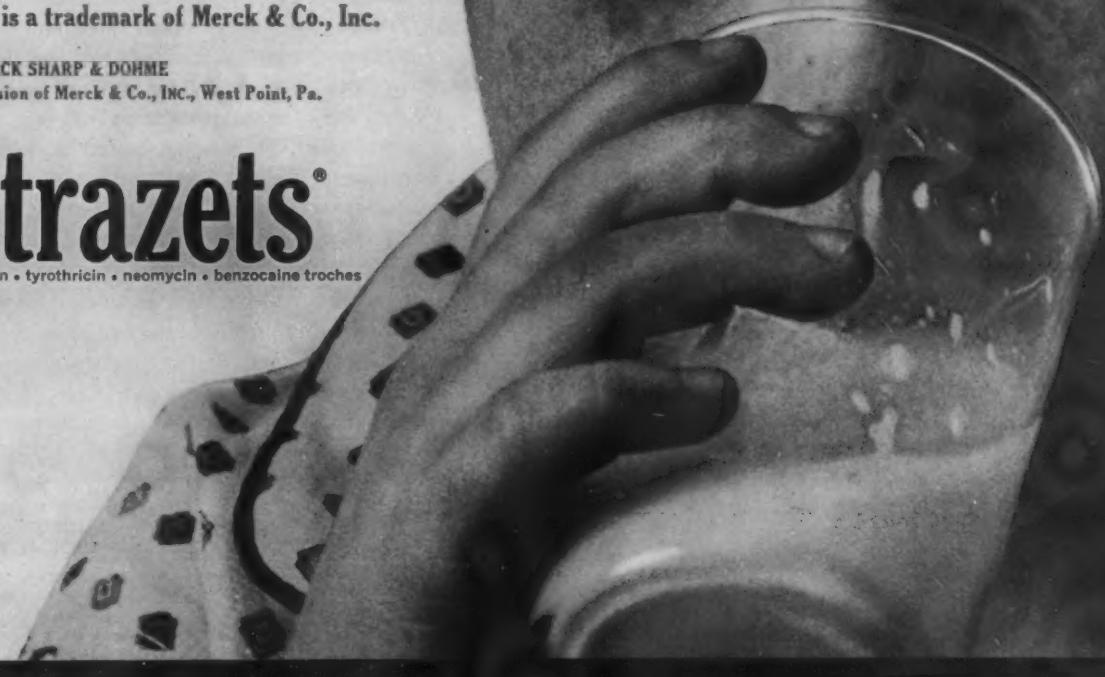
TETRAZETS for mouth and throat irritations, after tonsillectomy, and as adjunctive therapy in Vincent's infection, pharyngitis, and tonsillitis. Supplied in bottles of 12. Usual dosage one troche every three hours for not more than two days.

TETRAZETS is a trademark of Merck & Co., Inc.

MSD MERCK SHARP & DOHME
Division of Merck & Co., INC., West Point, Pa.

Tetrazets®

zinc bacitracin • tyrothricin • neomycin • benzocaine troches





MODERN THERAPEUTICS

New therapies and significant clinical investigations abstracted from other journals.

Cocktail Can Trigger Migraine in Some

Dr. E. Charles Kunkle, writing in the J.A.M.A. said:

"The ability of alcohol to trigger a migraine headache is noted by only a few patients. The response is most strikingly evident in persons with a common migraine variant, the 'cluster' headache. In these the vulnerability to alcohol is ordinarily evident only during the period when headaches are occurring in rapid succession (in a cluster) and may be brought out by even one cocktail."

Although the alcohol-triggered migraine has long been recognized, Dr. Kunkle said, it has not been studied in detail. It is distinct from the hangover headache, he said.

Meprobamate-Promazine Therapy for Geriatric Patients

It is unfortunate, according to the author, that dedication to the prolongation of life has not been accompanied by means of providing adequately for the socio-economic status of the aged. The general attitude was that a chronic brain syndrome associated with cerebral arteriosclerosis with psychotic reaction and behavioral problems was not amenable to treatment. It is now recognized, however, that, in many instances, these patients may be helped to become once again acceptable members of society.

Meprobamate and promazine, used separately, were known to be efficacious in the

treatment of these patients; their use in combination has been of more recent application. Promazine acts on the hypothalamic region and meprobamate on the thalamic region of the brain. Emotional disturbances apparently involve multiple neural pathways. In a study conducted in the first three months of 1960, 26 male geriatric patients were selected. All were ambulatory, and 17 had been institutionalized for varying periods. The physical health was reasonably good, and all patients were classed as suffering from chronic brain syndrome associated with cerebral arteriosclerosis, and psychotic and behavioral reactions. All medication was withheld for a period of ten days, then a combination of 200 mg. of meprobamate and 25 mg. of promazine hydrochloride (Prozine) was administered three times daily in capsule form. When required, the dosage was doubled gradually for a short time, but never exceeded six capsules daily. As a result of treatment, 21 patients showed marked improvement, and the remaining five were more calm, more quiet, and more cooperative. Drowsiness occurred at the beginning of treatment, but in no case were side-effects severe. It must be remembered that there is no cure for aging processes, but the use of the combined therapy described appears to facilitate adjustment of the aged to an altered status.

V. I. KOZLOWSKI, M.D.
Jour. Amer. Geriatrics Soc., 9: No. 5, 376, 1961
Continued on page 190a

BASIC!

in ear, nose and throat therapy



These six medications have demonstrated, through clinical trials, in countless patients, outstanding qualities of effectiveness and safety—qualities that have led to White's pre-eminence as a manufacturer of specialties for E. N. T. therapy. The pages that follow are a concise reminder of the clinical advantages offered by each. Complete information concerning the use of these specialties is available on request.

White

WHITE LABORATORIES, INC. / Kenilworth, New Jersey

Otobiotic®

3.5 mg. neomycin (from sulfate) and 50 mg. sodium propionate per cc.

Antibiotic/Antifungal EAR DROPS
"...Better results than ever before..."* in
OTITIS EXTERNA & CHRONIC OTITIS MEDIA



- controls infection • reduces exudation • stops pruritus
- physiologic pH • relieves pain • does not distort otic landmarks • virtually nonsensitizing and nonirritating

Available in 15 cc. dropper bottles.

*Lawson, G. W.: Postgrad. Med. 22:501 (Nov.) 1957

White

WHITE LABORATORIES, INC./Kenilworth, New Jersey

Disomer

YOUR ALLERGIC PATIENT REMAINS
ASYMPTOMATIC AND ALERT!

94.7% effectiveness - side effects at placebo level

CHROMOTABS® (Sustained Action Tablets) 4 mg. and 6 mg., bottles of 100.

MILSTAD® (Suppository) Bottles of 100. 250M.P. 2mg./cc. per suppository.



Aspergum®

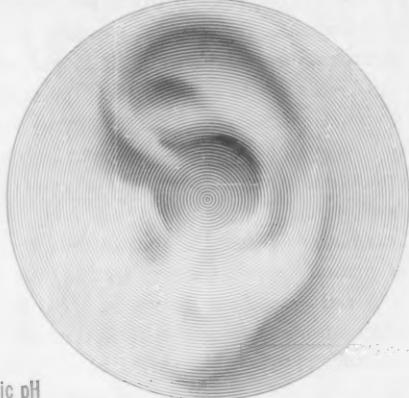
SOOTHES SORE THROATS

Available in handy pocket-packs of 16 and bottles of 36.



Otobione®

ANTI-INFLAMMATORY/Antibiotic/Antifungal Sterile EAR DROPS



Physiologic pH

Effective relief in 82% of 3334 cases* of external otitis, chronic otitis media and chronic mastoiditis with otorrhea. FORMULA: Prednisolone acetate, 5 mg., neomycin (from sulfate), 3.5 mg. and sodium propionate, 50 mg. per cc. Available in 5 cc. bottles with "steri-sealed" dropper. *Case reports on file, White Laboratories, Inc.

Disophrol

GUARANTEED
TO SHRINK
AS IT
DRIES

In nasal congestion and rhinorrhea due to head colds, allergies and sinusitis—

Decongests Nasal and Sinus Passages...
Dries Mucous Secretions!

A sensibly simple formula: Disomer (dexbrompheniramine maleate) 2 mg., d-isopropadrine sulfate 60 mg. Available in bottles of 100 scored tablets

Orabiotic®

chewing gum troches

PROTECTS AGAINST SECONDARY HEMORRHAGE FOLLOWING TONSILLECTOMY

- reduces local postoperative pain and muscle spasm
- speeds resumption of normal diet by lessening postoperative discomfort



For oropharyngeal infections...

"A BACTERIOSTATIC

BATH" Releases a soothing flow of saliva that bathes sore throats with effective antibiotic and analgesic medications. Nonirritating and virtually nonsensitizing. Always a useful adjunct to systemic therapy.

FORMULA: Each troche contains Neomycin, 3.5 mg., Gramcidin, 0.25 mg., and Propesin, 2.0 mg. Available in packages of 10 and 20.

*Granberry, C., and Beatrous, W. P.: E.E.N.T. No. 36:294 (May) 1957.



WHITE LABORATORIES, INC./Kenilworth, New Jersey

CONTINUOUS RELIEF

FROM

ANGINAL SEIZURES

DAY AFTER DAY...

NIGHT AFTER NIGHT

Each Nitrovas tablet contains in timed disintegration form:

Nitroglycerine	2.6 mg.
Nicotinic Acid	20.0 mg.
Nicotinic Acid (for immediate release)	15.0 mg.

Dosage: One Nitrovas tablet on arising and one 12 hours later before the evening meal.

Precautions and Side Effects: Nitrovas may cause headache which is usually transitory. Use with caution in glaucoma.

Supply: Boxes of 60 and 120 tablets.

AIR-TRANS, INC., Brooklyn 20, New York

Nitrovas

MODERN THERAPEUTICS—Continued

Methylprednisolone Acetate in a New Base

While available topical steroid preparations are numerous, the author believes it worthwhile to report his results from the use of two preparations. The topical steroids used were methylprednisolone acetate, 0.25 percent, with and without neomycin, 0.5 percent. The preparation containing the neomycin was used only when infection was obviously present. The conditions treated were: atopic eczema, neurodermatitis, dermatitis venenata, infectious eczematoid dermatitis, and several others. Out of a total of 106 patients treated, 91 percent achieved excellent to good results. The preparations were applied three times daily, and duration of treatment varied between one and six weeks. What made the present study unique was the employment of a new cream base, the composition of which closely approximated that of normal human skin lipids. In addition, the synthetic formula is very similar to human skin lipids by infrared analysis and by chemical constants such as acid number, saponification number and iodine number. It is possible that this base is more miscible when skin lipids and would, therefore, encourage better percutaneous absorption of active ingredients. Also, the base might produce a concomitant emollient action that is superior.

J. KIMMELMAN, M.D.
Ohio State Medical Journal, 57: No. 1, 37, 1961

Blood Disorder Linked to Infectious Mononucleosis

A blood disorder of unknown cause today was linked to infectious mononucleosis.

Lt. Harold R. Schumacher, MC, U.S. Navy, Portsmouth, Va., writing in the J.A.M.A., said some cases of the blood disease known as thrombocytopenia may be due to latent infectious mononucleosis.

Thrombocytopenia is the medical term for a reduction in blood platelets, a blood component involved in coagulation.

Continued on page 194a



in mild or moderate rheumatoid arthritis...Decagesic maintains



a majority of patients on B.I.D. dosage...economically

Through the "antidoloritic"** effects of DECAGESIC you can maintain your patients with mild or moderate rheumatoid arthritis on the lowest possible steroid dosage, yet obtain improved functional status and greater relief of pain. DECAGESIC provides DECADRON®, for suppression of inflammation, and aspirin, for control of pain on movement. In many patients, higher-dosage steroid regimens may be replaced without loss of control, and long-range treatment continued with greater safety. DECAGESIC also adds a sense of well-being.

Simplified, economical regimen: DECAGESIC is usually effective in convenient twice-a-day dosage; cost of daily therapy is generally less than that of prednisone, prednisolone, and other corticosteroids.

This regimen provides a total daily dosage of:

1 mg. of DECADRON® dexamethasone
2000 mg. of aspirin (acetylsalicylic acid)
300 mg. of aluminum hydroxide (as the dried gel)

Indications: At B.I.D. maintenance levels—mild to moderate rheumatoid arthritis; at T.I.D. or Q.I.D. dosage levels—for acute, painful inflammatory musculoskeletal conditions and other conditions in which the conjunctive use of steroid and salicylate is indicated.

Dosage: Average maintenance dosage 2 tablets B.I.D. Some patients may require one or two additional tablets in a T.I.D. schedule. In patients with occasional local flare-ups, Injection DECADRON Phosphate in the affected joint will control the exacerbation, without

the need for increased oral dosage. The usual precautions of corticosteroid therapy should be observed. Before prescribing or administering DECAGESIC or DECADRON, the physician should consult detailed information on use accompanying the package or available on request.

Supplied: Bottles of 100. Each tablet contains 0.25 mg. of DECADRON dexamethasone, 500 mg. of aspirin (acetylsalicylic acid) and 75 mg. of aluminum hydroxide (present as the dried gel). Injection DECADRON Phosphate in 5-cc. vials, each cc. containing 4 mg. of dexamethasone 21-phosphate as the disodium salt; 8 mg. creatinine; 3.2 mg. sodium bisulfite, USP; 10 mg. sodium citrate, USP; 5 mg. phenol, USP; sodium hydroxide, USP, to adjust pH; water for injection, q.s. 1 cc.

*The term "antidoloritic" is used by Merck Sharp & Dohme to describe an agent designed to allay pain associated with inflammation—*dolor*=pain, *itis*=associated with inflammation. DECAGESIC and DECADRON are trademarks of Merck & Co., Inc.

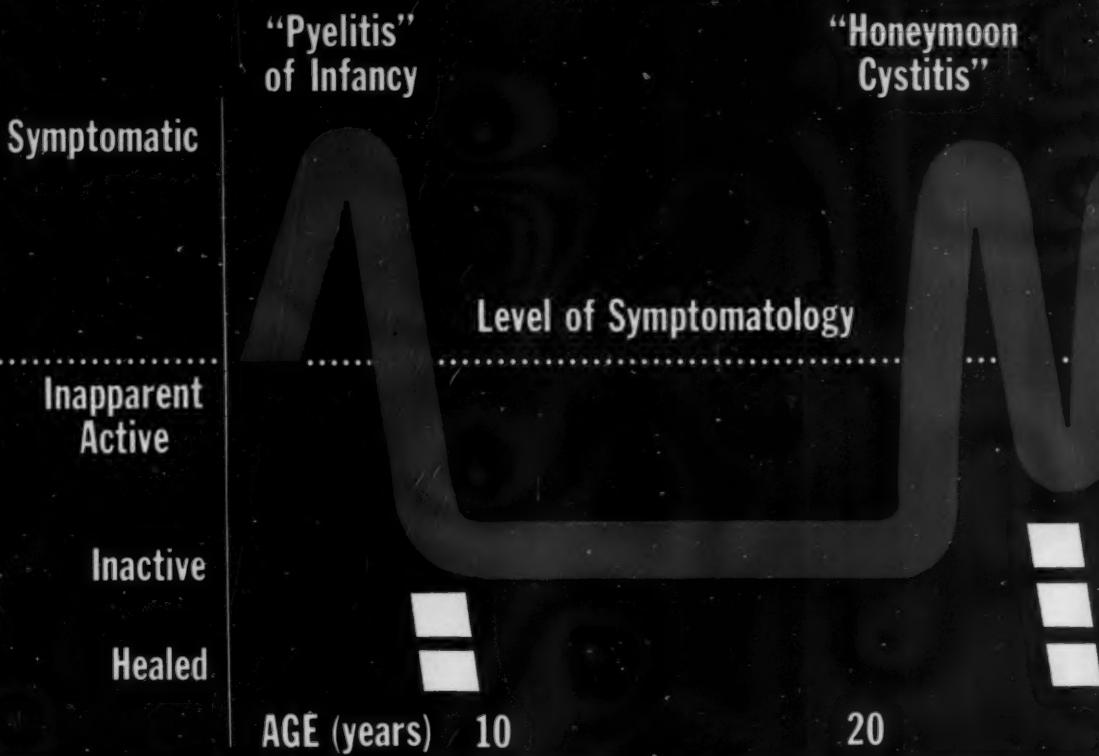


MERCK SHARP & DOHME • Division of Merck & Co., Inc., West Point, Pa.

Decagesic®
dexamethasone with aspirin and aluminum hydroxide

conservative management of mild or moderate rheumatoid arthritis

Natural History of Pyelonephritis



“...the theme that runs through the carefully taken history of most uremic patients with chronic pyelonephritis—the burning on urination of infancy, the chills and fever in childhood, the ‘honeymoon’ pyelitis, the recurrent urethritis treated so well and often locally—and yet the termination in uremia.”¹

at every age of life...at every stage of infection

Urinary tract infections of childhood are frequent, persistent and difficult to cure. If inadequately treated, serious sequelae in later life are too often the result. **The child-bearing age** represents a second major stage for urinary tract infection, a hazard to both mother and fetus, and a potential precursor of renal insufficiency if not thoroughly eradicated. **During the middle and later years** relapse and reinfection, with the spectre of renal failure, make management a grave problem—preserving function and prolonging life become the realistic therapeutic goals.

"Pyelitis" of
Pregnancy

Pyelonephritis

Asymptomatic
Bacteriuria

Uremia
Hypertension
LV Failure

30

40

50

Furadantin®

BRAND OF NITROFURANTOIN

**prompt - thorough - dependable - safe - economical
control of infection throughout the urinary system**

"... seems to be by far the most effective drug to be employed, and this has been substantiated in practice. It is a drug of low toxicity and, what is more important, bacteria rarely if ever become resistant to it. It can be employed for long periods of time, is bactericidal and does not favor the appearance of monilial infections."²

Average FURADANTIN Adult Dosage: 100 mg. tablet q.i.d. with meals and with food or milk on retiring. For acute, uncomplicated infections, 50 mg. may be administered. If improvement does not occur in 2 or 3 days, increase the dose to 100 mg. q.i.d. Supplied: Tablets, 50 mg. and 100 mg. Oral Suspension, 25 mg. per 5 cc. tsp.

1. Birchall, R.: Am. Practit. 11:918, 1960. 2. Sanjurjo, L. A.: Med. Clin. N. Amer. 43:1601, 1959.

Complete information in package insert or on request to the Medical Director.

EATON LABORATORIES, Division of The Norwich Pharmacal Company, NORWICH, NEW YORK



Infectious mononucleosis is a disorder characterized by irregular fever and sore throat accompanied by abnormalities of the white blood cells and usually involving the lymph glands and spleen.

Lt. Schumacher described the first reported case of chronic thrombocytopenia as a complication of infectious mononucleosis.

Thrombocytopenia is a rare complication of infectious mononucleosis and, in previous reported cases, most patients recovered from the blood disorder in six weeks, he said. The chronic case required about six-months' treatment, he said.

The onset of infectious mononucleosis is easily overlooked Lt. Schumacher said, and when not seen in its early stages may be diagnosed later as thrombocytopenia. He suggested that patients diagnosed as having thrombocytopenia be questioned about symptoms suggestive of previous mild infectious mononucleosis.

Fracture Danger Cited in Karate

The study of karate, a system of self-defense relying on the effective use of arm and body, should be undertaken only with a skilled, reputable instructor.

"The danger of fracture of a finger or metacarpal (hand) bone, whether occurring in a misdirected swipe of the [hand] or by overly enthusiastic pounding, is a real one," Dr. Alexius Rachun wrote in the J.A.M.A.

In order to achieve proficiency in karate, he said, it is necessary for the student to devote several years to a study which involves not only practice in the execution of skillful striking maneuvers of the hands and feet and other parts of the body, but, in addition, the striking edges and surfaces of these parts must be toughened and enlarged by repeatedly hitting them against progressively harder objects, he said.

It is important to recognize that the hands and feet of a karate expert are dangerous

weapons, and, for this reason, only responsible, emotionally stable students should undertake the study, he said.

Karate also is a physical art and sport with contest rules devised for competition.

Results of M.D. Physicals

Results of the physical examinations given 1,900 physicians during the recent, annual meeting of the American Medical Association in New York City were announced.

Electrocardiograms revealed heart abnormalities in 17.7 percent of 1,945 physicians, according to Dr. Charles E. McArthur, Olympia, Wash., chairman of the A.M.A. Committee on Annual Physical Examinations for Physicians.

Dr. McArthur said he was impressed with the consistency of the data during the seven years the M.D. physicals have been given at A.M.A. annual meetings. Despite the fact that each year there is a different group of examinees and different consultants, the normal electrocardiograms have been close to 80 percent each year, he said.

Chest x-rays of 1,900 physicians showed:

- Suspected tuberculosis in 5.3 percent.
- Other lung abnormalities in 6.1 percent.
- Cardiovascular abnormalities in 6.7 percent.
- Other conditions in 6.7 percent.

Carisoprodol Evaluated

Patients with motor difficulties due to brain injury — cerebral palsy — constitute a major challenge to the therapeutic efforts of the clinician. In the attempt to correct the motor disorders of cerebral-palsied patients, the author became interested in the possibilities of carisoprodol (Soma), a drug with analgesic and muscle-relaxant properties exerted through effects on the central nervous system. His investigations were conducted in connection with 72

Continued on page 196a

who
coughed?

WHENEVER COUGH THERAPY
IS INDICATED

HYCOMINE® Syrup

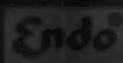
THE COMPLETE Rx FOR COUGH CONTROL

cough sedative / antihistamine
nasal decongestant / expectorant

- relieves cough and associated symptoms in 15-20 minutes
- effective for 6 hours or longer
- promotes expectoration
- rarely constipates
- agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE® Syrup contains:
Hycodan®

Dihydrocodeinone Bitartrate	5 mg.	6.5 mg.
(Warning: May be habit-forming)		
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Phenylephrine Hydrochloride		10 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.
Average adult dose: One teaspoonful after meals and at bedtime. (May be habit-forming. Federal law permits oral prescription.)		



Literature on request
ENDO LABORATORIES
Richmond Hill 18, New York

MODERN THERAPEUTICS—Continued

children seen in his private practice. Soma was given twice daily in 250-mg. capsules. In addition, the children received customary therapeutic measures indicated by the type of case. The observations of parents, physiotherapists and teachers were added to the findings of the author, since pertinent information concerning these cases did not necessarily lend itself to tabulation. After all possible information had been analyzed, it was found that satisfactory response had been attained in 90 percent of the cases. In a group of 51 children previously observed in whom ages and types of cases were similar, with the exception of the use of carisoprodol, a satisfactory response had been elicited in 78 percent of the patients. Taking into consideration its contribution to muscle relaxation and associated improvement in motor function, its helpful role in rendering children better able to cope with social behavior, and its almost complete freedom from side-effects, carisoprodol is a welcome and valuable adjunct in the treatment of cerebral-palsied children.

H. GOLDSTEIN, M.D.

Archives of Pediatrics, 78: No. 5, 194, 1961

Phenethicillin Evaluated

Phenethicillin (Chemipen), a semisynthetic penicillin, has been reported to produce high blood levels on oral administration, to be more resistant to penicillinase degradation than other penicillins, and to be more readily absorbed from the gastrointestinal tract. Since these advantages appear to be somewhat controversial, the authors decided to conduct their own study. Seventy-three institutionalized, normal children were included in the test. Disease conditions treated were: pharyngotonsillitis, otitis media, pneumonia, and several others. Chemipen, in tablet or syrup form, was administered three times daily in dosages ranging from 125 to 250 mg. The majority of cases was treated from seven to ten days. The drug was well accepted by the children. Results of treatment were rated as good in sixty-seven of

the children. In the cases of measles and infectious mononucleosis, a satisfactory response was not to be expected. With one exception, there were no untoward effects.

C. R. HALKIN, M.D., D. PEVNEY, M.D. and

F. ARKUS, M.D.

Archives of Pediatrics, 78: No. 2, 57, 1961

A New Topical Corticosteroid

A new corticosteroid, flurandrenolone, with a chemical formula which distinguishes it from hydrocortisone, is designed to impart maximum potency as an anti-inflammatory agent. In order to evaluate flurandrenolone as an effective topical anti-inflammatory agent, two studies were undertaken. Twenty-five young men were used in the first test. Flurandrenolone, 0.05 percent in THFA (tetrahydrofurfuryl alcohol), hydrocortisone acetate, one percent, in THFA, and THFA alone were applied as patch tests for 27 hours. THFA alone and 0.05 percent of flurandrenolone in THFA were applied to one arm, and one percent of hydrocortisone acetate in THFA and 0.05 percent of fluorandrenolone in THFA were applied to the other arm. Less erythema from the 0.05 percent of flurandrenolone in THFA was noted in 23 of the 25 subjects, when compared with the erythema from THFA alone. In the second clinical study, 160 patients were treated with topical flurandrenolone. The drug was used in either a cream or hydrophilic ointment base in a concentration of 0.05 percent. Beneficial results were noted promptly by the patient, in many of whom response other therapy had failed. Good or excellent results were noted in 79 percent of the 160 cases, and fair results, in 18 percent. No untoward effects were observed. Flurandrenolone appears to be a potent topical corticosteroid that seems safe for usage even on widespread areas of involvement.

H. R. GRAY, M.D., R. L. WOLF, M.D. and

R. H. DONEFF, M.D.

Archives of Dermatology, 83: No. 1, 18, 1961

Concluded on page 198a

"wearability"



NO TASTE FATIGUE
EXCELLENT RESULTS
NO CONSTIPATION

***the most widely prescribed and
most wearable of all antacids***
suspension tablets

Tablet Maalox No. 1 equivalent to 1 teaspoon Suspension
Tablet Maalox No. 2 equivalent to 2 teaspoons Suspension

Triclobisonium Chloride in a Skin Clinic

The requirements for topical therapeutics are multiplied in a skin clinic, according to the authors, where must be accomplished the maximum good in minimum time. Triclobisonium chloride (Triburon), a topical agent with marked antibacterial activity, appeared to supply this need. In addition, a combination of Triburon, 0.1 percent with hydrocortisone, 0.5 percent, designated Triburon-HC, promised to offer the further advantage of relieving inflammatory and allergic dermatoses. A series of 167 clinic patients was studied, using one or the other of the preparations. The patients ranged in age from four months to eighty years. The period of observation was seldom more than two weeks. The cutaneous lesions, in order of frequency, were: atopic dermatitis, impetigo, contact dermatitis, hand eczema, pyoderma, eczematoid dermatitis, neurodermatitis, folliculitis, stasis dermatitis, ecthyma and seborrheic dermatitis. As a result of medication, 76 patients were cured, and 76 were improved, the latter meaning that when last seen the dermatitis was well on the way to recovery. A point to be remembered when evaluating any drug is the fact that clinic use presents the most difficult test. The highly favorable results in this series, where 91 percent of the lesions were cured or improved, takes on special significance. No adverse reactions were observed.

It is concluded that Triburon alone or in combination with hydrocortisone is a safe and effective agent for the treatment of a wide range of dermatoses.

S. I. SATO, M.D. and J. R. DRIVER, M.D.
Ohio State Medical Journal, 57: No. 1, 33, 1961

Imipramine in Office Practice

Imipramine (Tofranil) bears a superficial chemical resemblance to the phenothiazin tranquilizers, but differs greatly in pharmacologic properties. It has no tranquilizing effect, and very little action on the central nervous system. It has a mild parasympathomimetic action that is responsible for most of its side-effects. It is distinct from other antidepressant drugs in that it has no inhibitory effect on the enzyme monoamine oxidase. The patients in the present study were all seen in private practice; all were victims of depressive reactions. Imipramine was administered in 25-mg. tablets. Four tablets were given daily at first, with an increase of one tablet a day until the amount had been doubled. A maintenance dosage was usually four tablets daily, or less. In addition to the Tofranil, each patient continued to receive his customary regimen of medication. The duration of the imipramine therapy was from 30 to 90 days and more (the latter being the time of writing). After one month, 79 percent of the patients were in complete remission, at the end of the second month, in 85 percent of the patients, remission was complete. Previous to starting the test, possible reactions had been explained to the patient, so that the problem of side-effects was minimized during the test. In 4 percent of the patients the drug had to be discontinued. Imipramine appears to be a safe and extremely useful drug in the office treatment of neurotic and psychotic depressive reactions, and has undoubtedly made hospitalization unnecessary in at least one-third of our patients.

E. A. DANEMAN, M.D.
Diseases of the Nervous System, 22: No. 4, 213, 1961

"I don't care
what he said
... no one has a liver
that interesting."





new infant formula nearly identical to mother's milk¹ in nutritional breadth and balance

Enfamil®

Infant formula

Enfamil babies are satisfied babies. Weight gains are good, and regurgitation is minimal. **Normal stool patterns.** Enfamil was compared with 3 other formulas in a well-controlled institutional study.² Stool frequency was low, and stool consistency was intermediate between the extremes of firmness and softness.

1. The Composition of Milks, Publication 254, National Academy of Sciences and National Research Council, Revised 1953. 2. Brown, G. W.; Tuholaski, J. M.; Sauer, L. W.; Minak, L. D., and Rosenstern, I.: J. Pediat. 56:391 (Mar.) 1960.



Mead Johnson
Laboratories

Symbol of service in medicine

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twice
the
muscle
relaxant
potency
for greater
relief
of pain
and spasm

NEW PARAFON®



Combining a superior skeletal muscle relaxant¹⁻³ with a preferred musculoskeletal analgesic,^{4,5} new PARAFON FORTE rapidly relieves *both* pain and muscle stiffness in low back disorders. Thus, the effective dual action of PARAFON FORTE increases the patient's range of motion and hastens recovery. PARAFON FORTE is equally effective in other musculoskeletal disorders, such as myositis, whiplash injuries, strains or sprains, and fibrositis. Side effects are rare, almost never require discontinuation of therapy.



FORTE

PARAFLEX® Chlorzoxazone* 250 mg.
TYLENOL® Acetaminophen 300 mg.

Dosage: Two tablets q.i.d. *Supplied:* Scored, light green tablets, imprinted "MCNEIL," bottles of 50.

References: (1) Settel, E.: Clin. Med. 6:1373, 1959. (2) Peak, W. P., and Smith, R. T.: Penn. Med. J. 63:833, 1960. (3) Mayle, F. C.; Sullivan, P. D., and Auth, T. L.: Med. Ann. D. C. 28:499, 1959. (4) Roth, J. L. A.: Med. Clin. N. Amer. 41:1517, 1957. (5) Batterman, R. C., and Grossman, A. J.: J.A.M.A. 159:1619 (Dec. 24) 1955.

*U.S. Patent No. 2,895,877

McNEIL LABORATORIES, INC., Fort Washington, Pa.

379A61

McNEIL



NEWS AND NOTES

Selected items of current interest from the fields of medical research and education.

Dyslexia Memorial Institute

The Dyslexia Memorial Institute connected with Northwestern University Medical School has been awarded a two-year grant of \$51,505 from the Illinois Department of Public Welfare to study difficulty in reading. The grant will be used for research on the types of reading difficulties and methods of treatment for them. Dyslexia is the inability to read properly, even though a person's intelligence may be normal or superior. The many factors causing the condition can usually be corrected. Along with improvement in reading ability in a child, his proficiency in other subjects also rapidly improves.

The Northwestern Institute is designed to try to answer the vast problem of reading difficulties in our educational system. Since its inception in 1938, the Institute has achieved a 75-percent rate of correction with the more than 1,000 retarded readers that have come under its guidance. About 30 percent of the pupils in grades four, five and six show that they do not have the reading ability to handle the work in their grades. Using a team approach, the Institute attempts to draw on many specialties to attack the failing child's physical and emotional problems from all angles. The child with the reading inability is examined by a staff of two physicians, a speech correctionist, a case worker, two psychiatrists, five psychologists and three teachers. Their findings and advice are made available to the parents, and

with their consent, to the family doctor and school.

Dr. Leslie B. Arey

Dr. Leslie B. Arey, Professor Emeritus at Northwestern University Medical School and internationally known anatomist, has been named an advisor to the Laboratory of Perinatal Physiology of San Juan, Puerto Rico, by Dr. James A. Shannon, Director of the National Institutes of Health, Bethesda. The San Juan laboratory is part of the National Institutes of Health. Dr. Arey is world-famous for his research in embryology, having placed special emphasis on the manner in which various systems and organs in the body originate and develop in the embryo. He will serve as a consultant in his field to the unique laboratory set up to do research on birth conditions and birth defects. A faculty member at Northwestern for 46 years, Dr. Arey retired in 1956 as chairman of the Medical School's Department of Anatomy, but has continued in teaching and research. His classic textbook, on "Developmental Anatomy," is used throughout the world. He has made many scientific contributions in the fields of obstetrics, gynecology and histology. He has served as president of the American Association of Anatomists, and is president of the Chicago Academy of Sciences.

Continued on page 204a



Congestion relieved

all day...all night
with only
one Extentab, b.i.d.

NEW

Dimetapp® Extentabs®

let your sinusitis, allergy and U.R.I. patients breathe easier!

DIMETAPP Extentabs contain Dimetane®(parabromdylamine [brompheniramine] maleate) 12 mg., phenylephrine HCl 15 mg., and phenylpropanolamine HCl 15 mg., a proved antihistamine and two outstanding decongestants. The dependable Extentab form provides sustained relief from the stuffiness, drip and congestion of sinusitis, colds and U.R.I. for 10-12 hours with a single dose.

A. H. ROBINS CO., INC.
MAKING TODAY'S MEDICINES WITH INTEGRITY



RICHMOND 20, VIRGINIA
SEEKING TOMORROW'S WITH PERSISTENCE

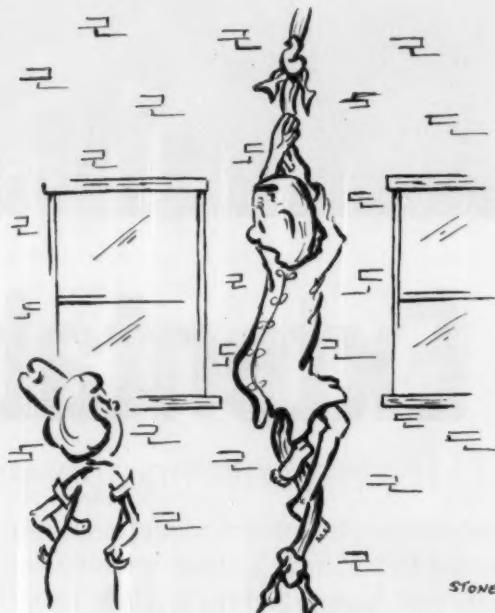
NEWS AND NOTES—Continued

Dr. Wright R. Adams

Dr. Wright R. Adams, a member of the medical faculty of the University of Chicago for 31 years, has been appointed Associate Dean of the Biological Sciences, Dean of the Clinical Faculty, and Chief of Staff of the University of Chicago Clinics.

Industrial Health

A specialized graduate training program in chronic disease and occupational hazards is now being offered by the Institute of Industrial Health, University of Cincinnati. It is open to physicians and qualified non-medical personnel. The program will lead to either a master or doctor of science degree. It will include the basic courses of biology and toxicology, but the emphasis will be on epidemiological and mathematical applications in the solution of industrial problems. The Public Health Service will finance the program with a grant of \$135,000.



"I'm wanted in surgery? Oh,
I forgot my operation is today."

Expanded Research at University of Colorado

The University of Colorado Medical Center was notified by the U.S. Surgeon General's Office of the approval of a seven-year grant of \$1,809,129 for expanded research programs in allergy, immunology, and infectious diseases. The grant is the first of its kind to be awarded by the National Institutes of Health, and will provide for the establishment of a clinical research center at the University of Colorado Medical Center. The research program will be under the direction of Dr. David W. Talmage, Professor of Medicine and Microbiology, and Head of the division of Allergy.

Traffic Death Toll

The number of traffic deaths in January 1961 was the lowest in nine years, according to the National Safety Council. The number was eight percent lower than the toll of 2,880 deaths in January 1960. It was estimated that the January traffic accidents caused injuries to 100,000 persons who were disabled beyond the day of the accident. The severe storms across the nation are believed to be a factor in the lowered accident toll in 1961.

Dr. Leslie Silverman

The appointment of Leslie Silverman, Sc.D., Professor of Engineering in Environmental Hygiene, as Head of the Department of Industrial Hygiene at the Harvard School of Public Health has been announced. He will succeed Professor Philip Drinker who will retire to become Professor of Industrial Hygiene, emeritus, after 40 years at Harvard. Dr. Silverman is Director of the radiological hygiene program and a member of the committee on the education program of the School of Public Health. He is a member and former chairman of the Atomic Energy Commission's advisory committee on reactor safeguards.

Continued on page 206a

A RETIREMENT
FUND HELPS
PROVIDE A
SECURE
FUTURE

ELDEC® KAPSEALS®

HELP PROVIDE A HEALTHY ONE

Because they are a reliable source of vitamins, minerals, hormones, and digestive enzymes, ELDEC Kapsals may help to check certain dietary and hormone deficiencies...favorably influence your patient's current and future status of health.

Each ELDEC Kapsal contains vitamins—1,667 units A, 0.67 mg. B₁ mononitrate, 0.67 mg. B₂, 0.5 mg. pyridoxine hydrochloride, 0.033 N.E. Unit (Oral) B₁₂ with intrinsic factor concentrate, 0.1 mg. folic acid, 33.3 mg. C, 16.7 mg. nicotinamide, 10 mg. dl-panthenol, 6.67 mg. choline bitartrate; minerals—16.7 mg. ferrous sulfate (exsiccated), 0.05 mg. iodine (as potassium iodide), 66.7 mg. calcium carbonate; digestive enzymes—20 mg. Taka-Diastase® (Aspergillus oryzae enzymes), 133.3 mg. pancreatin; amino acids—66.7 mg. l-lysine monohydrochloride, 16.7 mg. dl-methionine; gonadal hormones—1.67 mg. methyltestosterone, 0.167 mg. Theelin. *Dosage:* One Kapsal three times daily before meals. Female patients should follow each 21-day course with a 7-day rest interval. *Precautions:* Contraindicated in patients wherein estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy; give cautiously to females who tend to develop excessive hair growth or other signs of masculinization.

Packaging: ELDEC Kapsals are available in bottles of 100.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 28, Michigan

Radiation Research Center

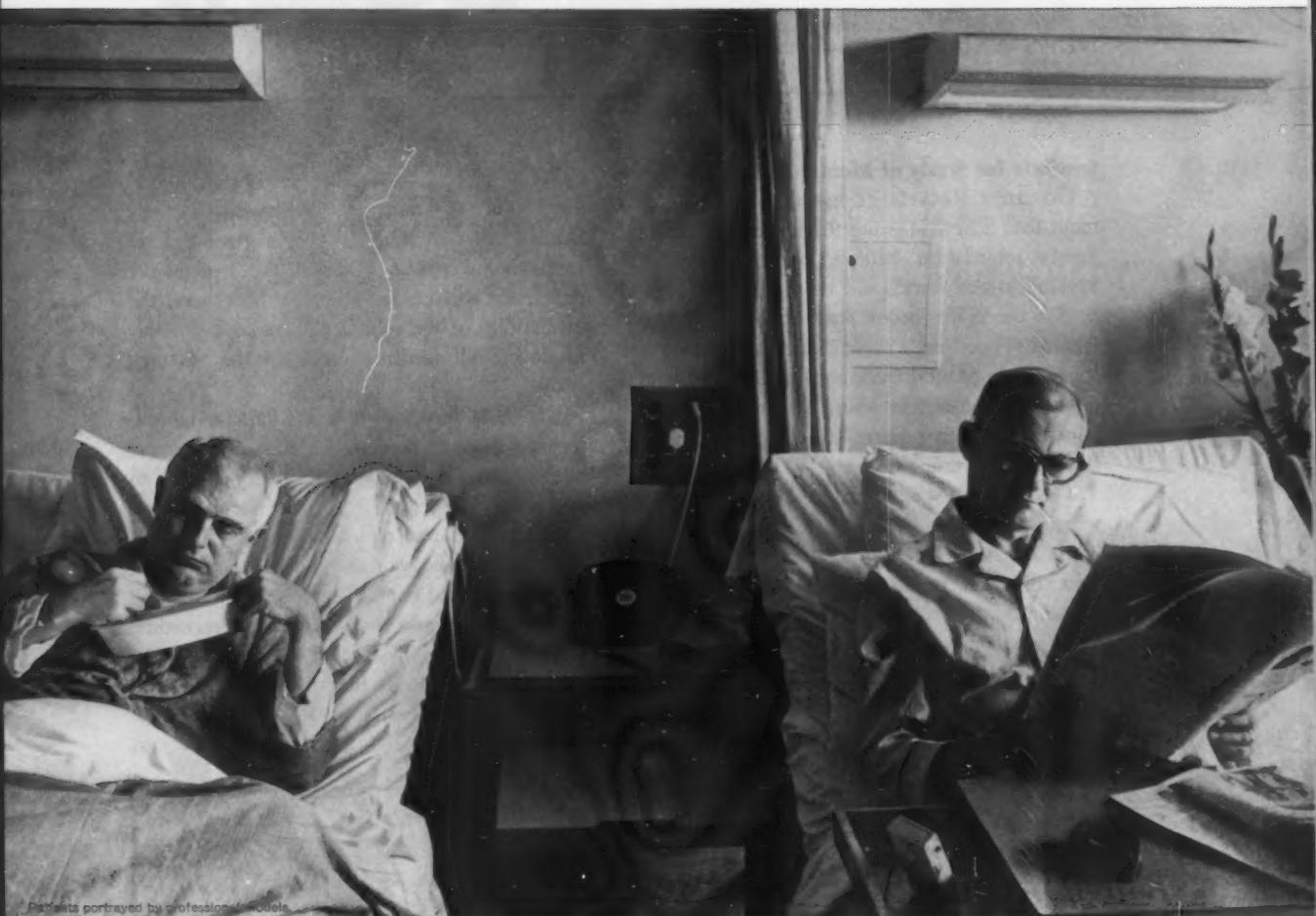
The New England Deaconess Hospital and the Harvard Medical School announce the receipt of an award of \$250,000 from the Fannie E. Rippel Foundation of Newark, New Jersey, as the initial gift toward the construction of an underground, three-level, radiation research laboratory — the first research facility of its type to be established in the nation. The structure will be erected at an estimated cost of \$1,800,000, and will house several types of high-energy radiation equipment for the experimental treatment of cancer, including multi-million-volt x-ray machines and linear accelerators to produce high-speed electrons. It was pointed out that the treatment of cancer by ionizing radiation of any type—x-ray, radioisotopes, linear accelerators or nuclear reactors—is based largely on empirical knowledge, lacking the depth that can be gained only through fundamental as well as clinical research. The new Center will explore the little-

understood changes that take place in cellular activity following exposure to radiant energy. At the same time, the Center will add to the present facilities for the treatment of selected cancer cases, for research in the more effective treatment of cancer, and for the training of medical students and postgraduate students in newly developed procedures. Hopefully, it will permit fruitful exploration of the combination of radiation and chemotherapy where early findings indicate the possibility of increasing the susceptibility of tumor cells to radiation while increasing the resistance of normal cells. The Center will not contain beds for the routine treatment of patients. Rather, it will accept for research purposes patients from the Deaconess Hospital and other hospitals in metropolitan Boston. The Deaconess will continue to use its regular facilities for diagnosis and radiation therapy, including its two-million-volt x-ray units.

Continued on page 208a



a pair of postoperative patients:



Patients portrayed by professional models.

both are free of pain—but only one is on

DILAUDID®

(Dihydromorphinone HCl)

swift, sure analgesia normally unmarred by nausea and vomiting

Before and after surgery, DILAUDID provides unexcelled analgesia. Its high therapeutic ratio is commonly reflected by lack of nausea and vomiting—and marked freedom from other side-effects such as dizziness and somnolence. DILAUDID thus facilitates early ambulation and simplifies postoperative management.

▲ by mouth ▲ by needle ▲ by rectum
2 mg., 3 mg., and 4 mg.

May be habit forming—usual precautions should be observed as with other opiate analgesics.



KNOLL PHARMACEUTICAL COMPANY • ORANGE, NEW JERSEY

Institute for Study of Mental Deficiency

Governor Rockefeller made the announcement that a new institute for basic research in mental retardation, believed to be the first of its kind in the world, will be established adjacent to the Willowbrook State School on Staten Island. The New York State Institute for Research in Mental Deficiency will be a unique undertaking in a field where research has been scant and where progress has been extremely slow, the Governor believes.

The Institute will be an independent facility where a number of scientific disciplines working in the same locality can carry out research from different points of view, using various techniques, but all primarily focused on the basic problems of mental deficiency. The Institute which will have its own director and staff will be in a position to establish close work relationships with medical schools in New York

City. Its proximity to Willowbrook State School will permit the use of a great deal of research material in which all types of mental deficiency will be represented. Moreover, the availability of the school will make it possible to devote all institute funds to the research effort.

The new installation will comprise laboratories, clinical facilities and administrative offices. Provision will be made for studies in psychology, biochemistry, pharmacology, genetics, and microbiology, biophysics, metabolism and pathology, including neuropathology, immunology and hematatology. Small wards will permit continuous observation and recording of patients' behavior. Facilities will be available for occupational therapy, recreation, and classroom instruction.

Continued on page 210a

**PREVENT CONSTIPATION
of WHOLE-MILK
Babies**

with such a delicious,
simple addition

that for over 50 years has kept babies free from constipation, and helped constipated children to quickly regain and KEEP normal regular bowel elimination! Safe, gentle, dependable MALT SUPLEX® (MALT SOUP EXTRACT)...the fine LAXATIVE MODIFIER OF MILK...

NOT A HABIT-FORMING DRUG BUT A NATURAL, NUTRITIVE FOOD MADE FROM MALTED BARLEY THAT CHANGES THE INTESTINAL FLORA TO ACIDURIC. JUST ADD TO BABY'S BOTTLE AND THE LOLLIPOPERS' MILK CUPS. (SEE P.D.R. FOR DOSE) NEVER ANY SIDE-EFFECTS, JUST HAPPY HEALTHY, CONSTIPTION-FREE YOUNGSTERS. DELICIOUSLY MALTY-TASTING SO THEY EAGERLY LOVE IT POWDER DISSOLVES FAST AND IS SO CONVENIENT

AVAILABLE IN DRUG-STORES EVERYWHERE IN 8 OR 16 OZ. JARS - Drier, may we send you Starter Samples? LIQUID POWDER just your card, sir, to

THE BORCHERDT CO., 217 N. WOLCOTT AVE., CHICAGO 12, ILL.

**IN CANADA
CHEMO-DRIER
CO LTD.
TORONTO 15**



VALUE



TOPICAL STEROID NEWS: BREAKTHROUGH IN THERAPY

In steroid responsive dermatoses you may prescribe new Panzalone Cream for rapid healing without concern about side effects and cost-to-patient, even when used on extensive areas for prolonged periods.

2% CREAM

PANZALONETM

delta-5-hemisuccinoylpregnolone*, DOAK

BREAKTHROUGH IN THERAPY

because the 2% concentration of Panzalone Cream helps assure quick relief of symptoms and more rapid healing of lesions,

because Panzalone is a new and fundamentally different steroid for topical application; it is non-corticoid and thus cannot produce corticoid side effects and

because cost-to-patient of an Rx for Panzalone Cream, reflecting the economies in synthesis of this new steroid, will be less than 1/2 the average for comparable topical steroid creams.

Panzalone Cream is applied 3-4 times a day, supplied as 15 Gram (1/2 oz.) tubes. Each gram of water washable cream contains 20 mg. of delta-5-hemisuccinoylpregnolone (Δ^5 -pregnen-3(β)-hemisuccinoyl-20-one), DOAK with Buro-Sol*, DOAK (equivalent to 3.38 mg. aluminum acetate), pH 5.5. Distributed in Canada by Trans-Canada Pharmacal Co., Montreal, P. Q.

*PATENT PENDING



PRICE

DOAK Pharmacal Co., Inc., New York 16, N.Y.

North Hills Emergency and Health Center

St. John's General Hospital, Pittsburgh, plans to build a \$1,200,000 emergency, diagnostic, and health center in North Hills, Pittsburgh. The center would supplement the in-patient facilities of existing hospitals, and encourage more efficient and less costly service. Federal aid amounting to \$372,000 has been allocated for the project. North Hills Emergency and Health Center will be available to all physicians. Similarly, patients may be transferred to any other hospital, not only to St. John's. The Center will have no in-patient facilities other than its emergency rooms. Tentative plans for the Center include:

Around-the-clock emergency service, with a resident physician or staff doctor and a registered nurse on duty at all times. All patients treated will be referred back to their own physicians.

Diagnostic services, including X-ray, laboratory, electrocardiogram, and basal metabolism, will be available to all physicians on a 24-hour basis.

Community health services, such as a well-baby clinic, child guidance center, maternity center, regularly scheduled specialty clinics, and a home-care center.

Rehabilitation services on an out-patient

basis for many illnesses, including nervous disorders and alcoholism.

County Health Department offices, facilities for mass inoculations, and a disaster center able to handle 100 casualties.

Offices for 22 physicians and two dentists, who will not need expensive special equipment because of its availability in the Center.

Blood Research Center

The Red Cross has announced that it will build a laboratory for blood research at Bellevue Hospital, New York City. Its major project will be the dissolution of blood clots, such as those that cause coronary thrombosis, phlebitis, and strokes. The laboratory will also provide facilities for basic research in blood enzymes, one of which, fibrinolysin, dissolves clots. The Bellevue laboratory will be the second of several such centers planned by the Red Cross. The first was opened in Los Angeles, November 1960.

Michael Reese Hospital to Expand

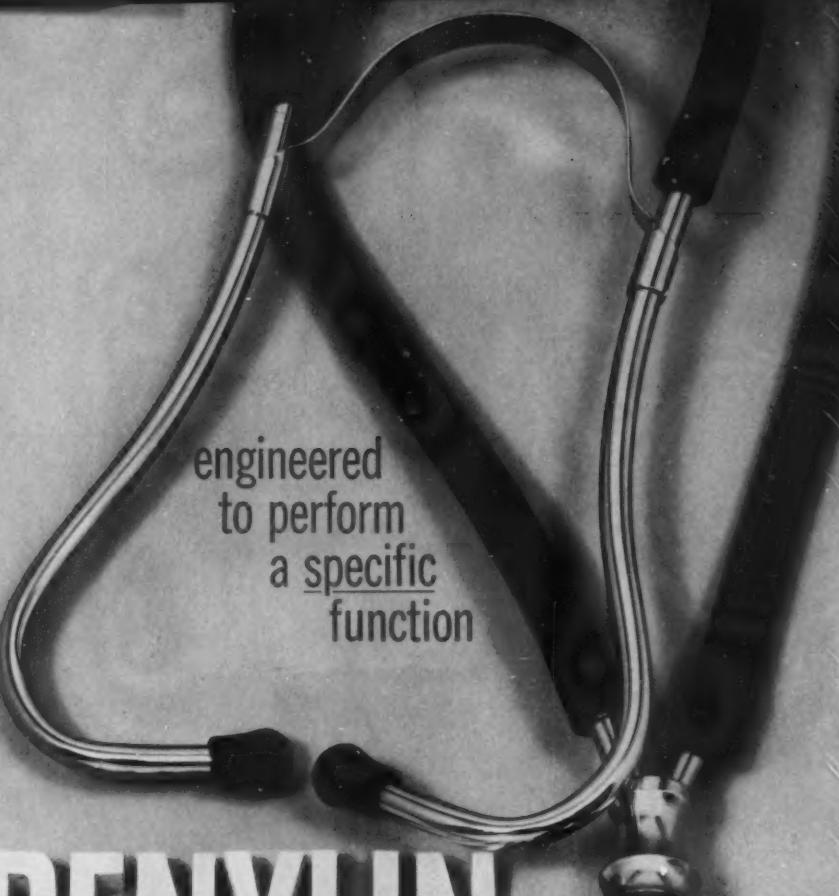
A major expansion program is underway at the Michael Reese Hospital and Medical Center in Chicago. The \$16,000,000 project is expected to be completed within five years. Present plans include a research building; women's and children's hospital; psychiatric clinic; surgical wing; orthopedic center; pavilion for medical and surgical patients, and a general services building.

Already the largest private voluntary hospital in Chicago and one of the leading medical centers in the nation, Michael Reese's expansion will enable the institution greatly to increase its vital service to the community. An area which had been earmarked by the Chicago Land Clearance Commission for a park to serve the needs of the hospital and people living in the community has been purchased by Michael Reese.

Continued on page 214a



"I have a dizzy feeling in my rectum."



engineered
to perform
a specific
function

BENYLIN EXPECTORANT

specifically designed to help control cough

Just as a medical instrument is engineered for maximum efficiency in performing its specific function, BENYLIN® EXPECTORANT is formulated to provide effective relief of cough associated with colds or allergy.

The outstanding antitussive action of BENYLIN EXPECTORANT is attributed to a combination of carefully selected therapeutic agents. Benadryl®, a potent antihistaminic-antispasmodic, reduces bronchial spasm, quiets the cough reflex, and lessens nasal stuffiness, sneezing, lacrimation, itching, and other allergic manifestations. Concurrent respiratory congestion is relieved by expectorant agents that efficiently break down tenacious mucosal secretions. In addition, a demulcent action soothes irritated throat membranes.

BENYLIN EXPECTORANT is a pleasant-tasting, raspberry-flavored syrup...completely acceptable to patients of all ages.

supplied: BENYLIN EXPECTORANT is available in 16-ounce and 1-gallon bottles.

Each fluidounce contains: 80 mg. Benadryl Hydrochloride (diphenhydramine hydrochloride, Parke-Davis); 12 gr. ammonium chloride; 5 gr. sodium citrate; 2 gr. chloroform; 1/10 gr. menthol; and 5% alcohol. *Indications:* Relief of coughs due to colds, other symptoms associated with colds, and coughs of allergic origin. *Dosage:* Adults—1 to 2 teaspoonfuls every three to four hours. Children— $\frac{1}{2}$ to 1 teaspoonful every four hours. *Precautions:* Products containing Benadryl should be used cautiously with hypnotics or other sedatives; if atropine-like effects are undesirable; or if the patient engages in activities requiring alertness or rapid, accurate response (such as driving).

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 22, Michigan



Medrol... (methylprednisolone) a form for every use

MEDROL* TABLETS
2 mg. in bottles
of 30 and 100
4 mg. in bottles
of 30, 100 and 500
16 mg. in bottles of 50

SOLU-MEDROL*
40 mg. in 1 cc.
Mix-O-Vial*

MEDROL MEDULES*
4 mg. in bottles of
30, 100 and 500
capsules
2 mg. in bottles
of 30 and 100

DEPO-MEDROL*
acetate
40 mg./cc.
in 1 cc. and
5 cc. vials
20 mg./cc.
in 5 cc. vials



MEDROL
WITH ORTHOXINE*
TABLETS
in bottles of 30 and 100

VERIDERM† MEDROL_{acetate}
AND
NEO-MEDROL*_{acetate}
0.25% and 1%
in 5- and 20-Gm. tubes

MEDAPRIN* TABLETS
in bottles of 100 and 500

*Trademark, Reg. U.S. Pat. Off.
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The Upjohn Company, Kalamazoo, Michigan

Upjohn
75th year

Children's Hospital at Fort Worth

The new Fort Worth Children's Hospital, dedicated to the care of sick and injured children of Fort Worth and surrounding areas was opened recently. Initially, the new hospital has 34 beds and 47,000 square feet of space in a modern structure with exterior walls of white quartz-and-concrete panels, trimmed with black granite. The hospital represents an initial investment of more than a million dollars. The building's foundations are constructed to allow for eight additional floors, for an ultimate capacity of 250 beds.

The hospital is connected by an underground tunnel with Harris Hospital, and each hospital uses certain facilities and services of the other to avoid unnecessary duplication. Designed and equipped especially to serve the needs of children, the building has patient rooms with one, two, and four beds each. Some of the

rooms open on the hospital's two garden courts. Every room has television. Also in patients' rooms are large lounge chairs which open to make comfortable beds when a parent needs to remain overnight near a sick child. Facilities of the hospital include a fully equipped emergency room, a children's playroom, a large snack bar for the convenience of parents, and a small chapel.

Grant to Creighton University

A three-year grant totaling \$77,086 has been received by Dr. Wayne H. Akeson, Department of Orthopedic Surgery at the Creighton University School of Medicine. His research will include studies, by chemical methods, to determine why soft tissue loses its normal elasticity when a limb is immobilized for an extended period.

Continued on page 218a

NEW

ANTIBACTERIAL / ANALGESIC
*for rapid, safe and effective
control of mild and moderate
oropharyngeal infections*



t·p·l™ TROCHES

contain a new local chemotherapeutic agent with a unique dual action*

SAMPLES
AND LITERATURE

write:

The KASDENOL CORP.

P.O. Box 57 Huntington
New York

ANTIBACTERIAL (without antibiotics) — highly effective in vivo against gram-negative and gram-positive organisms in the mouth and throat.

ANALGESIC (without 'caine' or 'quinoline' derivatives) — prompt and long-lasting analgesia on all oropharyngeal mucosa.

DOSAGE: One t.p.l. TROCHE q.i.d. X 3 days.

AVAILABILITY: Boxes of 12s at your local pharmacy.

*TRIAMITE contains benzoic acid, para-hydroxybenzoic acid, trihydroxybenzoic acid (gallic) partly esterified with n-propyl alcohol.

Bonadoxin® stops Morning Sickness... *9 times out of 10*



...and other
types of
Nausea and
Vomiting

NOW 3 DOSAGE FORMS

when your OB patient needs the best in prenatal
vitamin-mineral supplementation . . . OBRON®

BONADOXIN TABLETS

*when the patient can
take oral medication*

Each tiny tablet contains:
meclizine HCl (25 mg.) for
antinauseant action; pyri-
doxine HCl (50 mg.) for
metabolic replacement.

BONADOXIN DROPS for infant colic

Each cc. contains: mecli-
zine equivalent to 8.33 mg.
of the hydrochloride; pyri-
doxine equivalent to 16.67
mg. of the hydrochloride.
Three cc. of Bonadoxin
Drops equal one Bona-
dixin tablet in meclizine
and pyridoxine content.

and the new
BONADOXIN
INTRAMUSCULAR
SOLUTION
*when the oral route
is not feasible*

Each cc. contains: mecli-
zine equivalent to 25 mg.
of the hydrochloride; pyri-
doxine equivalent to 50
mg. of the hydrochloride.



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Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®



A B

**Witch Doctors
guaranteed to cast
a decorative spell
over your office
or home**

African Ebony Sculptures

These witch-doctor figures are handcarved by members of the Wazaramu tribe in Tanganyika. The wood is solid ebony, as hard and shining as black marble.

Because they are made by individual native craftsmen, no two figures are exactly alike. This means that at a small cost you can get a work of art—an original sculpture—that is unique. Sizes range from 12 to 15 inches in height.

Price: Figure A, \$6.95 Figure B, \$5.95.

To cover packing, mailing and insurance charges, please add (for each figure ordered) 45 cents for shipments East of the Mississippi, 95 cents for shipments West of the Mississippi.

MEDICAL TIMES OVERSEAS, DEPT. M, 1447 NORTHERN BLVD., MANHASSET, N. Y.



in rheumatoid

arthritis... objective evidence of relief

In a series of 24 handicapped arthritics treated with dexamethasone for 8 to 16 months, ring size decreased consistently — objective evidence of antirheumatic effects which were maintained throughout the entire period of observation. Improvement was also noted in other antirheumatic indices, i. e., pain on motion, tenderness, swelling and morning stiffness.¹

Supplied: as 0.75 mg. and 0.5 mg. scored, pentagon-shaped tablets in bottles of 100. Also available as Injection DECADRON Phosphate and new Elixir DECADRON. Additional information on DECADRON is available to physicians on request. DECADRON is a trademark of Merck & Co., Inc.

Reference: 1. Bunim, J. J., in Hollander, J. L.: Arthritis and Allied Conditions, ed. 6, Philadelphia, Lea & Febiger, 1960, p. 364.



MERCK SHARP & DOHME

Division of Merck & Co., Inc., West Point, Pa.

Decadron®

Dexamethasone



NEWS AND NOTES—Continued

Dr. Perrin Long Retires

Dr. Perrin H. Long, who recently retired as professor of medicine at the State University of New York Downstate Medical Center in Brooklyn, has been named professor emeritus, it was announced by Robert A. Moore, president of the medical center. Dr. Long, who served as chairman of the department of medicine at the Downstate Medical Center and chief of medicine at Kings County Hospital from 1951 to 1960 and as professor of medicine from 1960 to the present, was honored at the annual Kings County Hospital medical staff dinner by his students, house officers, and associates. He was presented with a testimonial book announcing the creation of a special fund to establish the Perrin H. Long Collection in the department of medicine library. Dr. Long received his medical degree from the University of Michigan in 1924 and served on the faculty of the Johns Hopkins Medical School in Baltimore for 22 years before going to Brooklyn. Dr. Long will continue his work as editor of *Resident Physician* and *Medical Times*.

Dr. Sabin Visiting South America

Dr. Albert B. Sabin left Cincinnati earlier in the year to confer with public health officials of several South American governments on the use of his oral polio vaccine. The Doctor was invited by the Brazilian Ministry of Health to consult on that nation's recent decision to use the Sabin oral vaccine. A vaccination program will be initiated in Brazil for all children under five years of age. Beside lectures at the University of Brazil, Dr. Sabin's tour will include Uruguay, Argentina and Chile.

Program Study at University of Illinois

The University of Illinois College of Medicine has been awarded \$128,000 for a two-year study and evaluation of its over-all program in medical education by the Commonwealth Fund of New York City. The grant is a renewal of an original endowment of \$112,000 for a two-year period ending in 1961. The University of Illinois College of Medicine is typical of a group of publicly supported schools whose teaching problems have been accentuated in recent years by markedly increased enrollments. The Fund grant provides for a full-time staff which will enable the administration and faculty to carry out an intensive study of scientific teaching methods, advance instruction in patient care, and development of a permanent program of research.



"Why did you decide to specialize in proctology?"

University Hospital

September 28, 1961 saw the cornerstone ceremonies for the last unit in the present building program of the New York University Medical Center, New York City. The 18-story, 600-bed University Hospital is scheduled for completion in the fall of 1962. Guests witnessing the ceremony included national, state and city officials, with Winthrop Rockefeller, Chairman of the Medical Center Board, acting as master of ceremonies.

Continued on page 222a

HY-0984

Hygroton®

brand of chlorthalidone

in hypertension
and edema

17 days free each month
from drug
administration

just one tablet
Mon. Wed. Fri.

The longest-acting by far
of all the new agents
introduced for
hypertension and edema,
Hygroton provides a
smoother, less abrupt action
which is sustained for
as long as 72 hours...can
initiate and maintain therapy
on just 3 doses a week...
saves the patient over
 $\frac{1}{3}$ in cost without sacrifice
of therapeutic benefit.

Hygroton® Tablets,
100 mg., bottles of 100.



Geigy



Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York

is pharmaceutical advertising really “advertising”?



of course it is, though some have called it “education” . . . not really “advertising.”

Of course it's “advertising” . . . a frankly competitive activity of the American private enterprise system to which this industry belongs. Of course it's “advertising” . . . created in the hope of getting the physician to note and read; of persuading him, by setting forth proven indications and advantages, to learn about a drug; and of thereby helping him alleviate suffering or cure disease by prescribing it.

“Advertising”? Surely! BUT indisputably different from any other advertising in the world (which is just what has led people to devise various different names for it). For in its proper role it communicates the vital information . . . good, bad, and indifferent . . . and it keeps the physician abreast of each useful new clinical application and each new danger revealed during increasing use of the drug.

There's been a lot of talk about “over-advertising”, and there may have been occasional excesses. But consider the potential dangers, in this era of astonishing new drugs, of “under-advertising” . . . in view of the complexity of modern drug therapy; the lag of 6 to more than 18 months before the appearance of definitive medical articles on new drugs; and the fact that there is no other source of such comprehensive information about a new agent as the company that ran it through the crucial gauntlet of animal pharmacology and clinical investigation.

This message is brought to you on behalf of the producers of prescription drugs. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.



When the rhythm is wrong...PRONESTYL® HYDROCHLORIDE

"Procaine amide [Pronestyl] should be [a] drug of choice in arrhythmias of ventricular origin."¹ "Pronestyl will be [a] drug of choice for intravenous use. The intramuscular preparation of Pronestyl has a clear advantage over the intramuscular preparation of quinidine because effects develop more rapidly."² Pronestyl sometimes stops arrhythmias which have not responded to quinidine.^{3,4} Pronestyl may be used in patients sensitive to quinidine... more prolonged action, less toxicity, less hypotensive effect than procaine... no CNS stimulation such as procaine may produce.

Supply: For convenient oral administration: Capsules, 0.25 Gm., in bottles of 100 and 1000. For I. M. and I. V. administration: Parenteral Solution, 100 mg. per cc., in vials of 10 cc. For full information see your Squibb Product Reference or Product Brief.

References: 1. Zanchi-Oliver, A., et al.: Am. Heart J. 63:654, 1962.
2. Modell, W.: In Drugs of Choice, C. V. Mosby Co., St. Louis, 1960,
p. 418. 3. Karpman, H., et al.: Med. Concepts Controvers. Dis. 26:100,
1951. 4. Miller, H., et al.: J.A.M.A. 185:104, 1951.

Squibb



Squibb Quality — the Priceless Ingredient

Teaching Auditorium at Dartmouth

The Dartmouth Medical School is planning the construction of a teaching auditorium of a 350-seat capacity. It will be equipped with the newest audiovisual equipment and other teaching aids for lectures, demonstrations, and conferences. A recent grant from the W. K. Kellogg Foundation of \$500,000 will finance the project.

Expanded Research Facility in Illinois

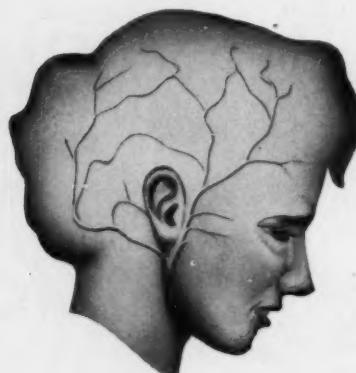
Clinical research at Northwestern University Medical School and Passavant Memorial Hospital will be substantially expanded through a two-million-dollar, seven-year program supported by the National Institutes of Health. The research will be conducted at Passavant, one of five affiliated hospitals, where construction will begin late in 1961 on a 14-bed, self-

contained research center. The area already contains a metabolism unit consisting of a special diet kitchen, a biochemical laboratory, offices, and patient accommodations. The unit will be expanded with two more laboratories, a patient physiological observation room, an external isotope counting room, an instrument room, and utility facilities.

Dr. George Papanicolaou

Dr. George N. Papanicolaou has been named Director of the Cancer Institute in Miami. When he assumes his new post in 1961, it will terminate an association of 48 years with Cornell University Medical College, where he was currently professor emeritus of clinical anatomy. The Institute will have a \$250,000 research facility ready for the Doctor's arrival.

Continued on page 228a



ACTS DIRECTLY on dilated cerebral arteries to reduce throbbing and intracranial pressure.

CONTROLS EMOTIONAL STRESS that causes cerebral vasodilation and muscular contraction in the nuchal and scalp regions.

REDUCES PERCEPTIVE and reactive components of cerebral pain by three distinct actions.

*For literature and clinical supply, write to
CARNICK*

G. W. Carnick Co., Newark 4, N. J.

NEW for MIGRAINE, MIGRAINE VARIANTS, TENSION HEADACHES

COMPOSITION: Each Midrin capsule contains: Isometheptene Mucate 65 mg., Dichloralphenazone 100 mg., and N-acetyl-p-aminophenol 325 mg.

USUAL ADULT DOSAGE: **Migraine:** Two capsules start, then 1 every hour until relief is obtained (maximum, 5 within a 12-hour period). **Tension Headache:** One or two q. 4 h. (maximum: 8 per day).

MIDRIN
CAPSULES

for migraine, migraine variants and tension headaches.



Why physicians are turning to **KORO-FLEX-**[®] the arcing contraceptive diaphragm of choice

1. Reduces fitting and instructing time.
2. Patient ease of insertion—automatic placement.
3. Develops patients' confidence. Easy to use.
4. Folds behind pubic bone with suction-like action, forming an effective barrier.
5. Locks in spermicidal lubricant—delivers it directly under and next to the os uteri.
6. May be used where ordinary coil-spring and flat rim diaphragms are indicated.

Recommend: KORO-FLEX Compact, the ONLY compact that provides the arcing diaphragm (60-95 mm) and Koromex jelly and cream (trial size). More satisfied patients result from trying both and then selecting the one best suited to physiological requirements. Eliminates guessing. Supplied in feminine clutch-style bag with zipper closure. Write for literature.



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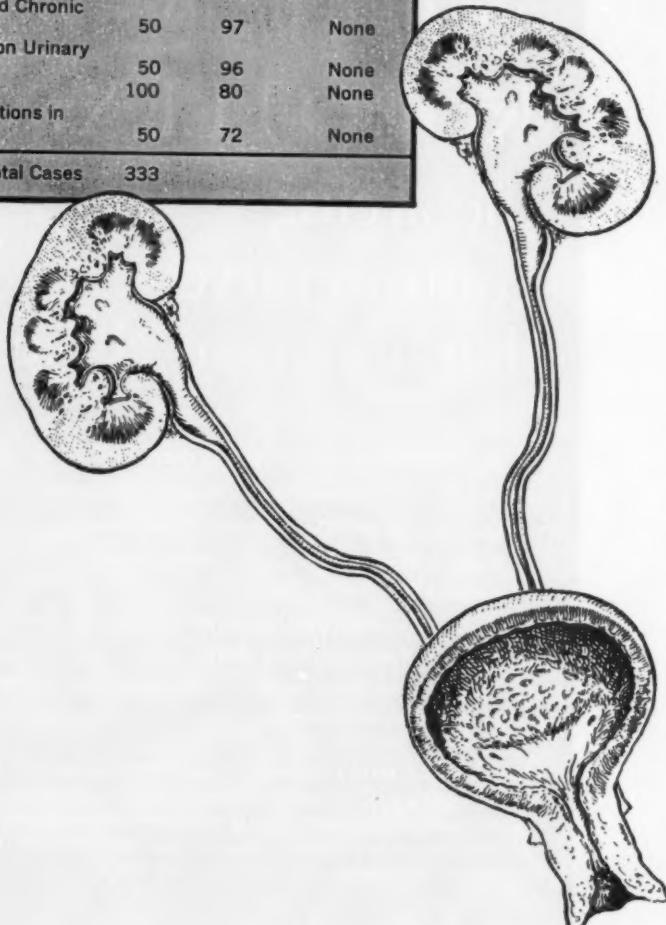
First Choice

for safety, effectiveness and dependability¹⁻⁵

IN ACUTE AND CHRONIC

RECENT PROOF OF CLINICAL EFFECTIVENESS OF URISED

Author	No. of Patients Treated	Per cent of Satisfactory Response	Side Effects
Sands ¹ (Trigonitis)	83	83.2	One (mild rash)
Haas & Kay ² (Acute and Chronic Urinary Infections)	50	97	None
Renner, ³ et al. (Common Urinary Infections)	50	96	None
Marshall ⁴ (Cystitis)	100	80	None
Strauss ⁵ (Urinary Infections in the Aged)	50	72	None
Total Cases	333		





URINARY TRACT INFECTIONS URISED.[®]

Urised rapidly provides soothing relief and combats infection along the entire urinary tract. Effective in 80% to 90% of urinary tract infections,¹⁻⁵ Urised establishes free urinary flow, thus overcomes urinary retention, stagnation and consequent bacterial growth. Urised contains no antibiotics or sulfonamides, causes no renal damage, crystalluria, or blood dyscrasias. It is effective in acid or alkaline urine, and reduces need for extensive laboratory work.

Each Urised Tablet Contains:

Atropine Sulfate.....1/2000 gr. Hyoscyamine.....1/2000 gr.
With Methenamine, Methylene Blue, Benzoic acid, Salol and Gelsemium.

Indications:

Soothing, urinary antiseptic-antispasmodic for rapid relief of pain, urgency, dysuria and frequency. Clinically safe and effective for treatment of acute or chronic cystitis, urethritis, pyelitis, pyelonephritis, prostatitis and ureteritis.

Dosage:

Adults:
2 tablets q.i.d. with full glass of water. Acute Cases: Start with 2 tablets every hour for three doses.

Supplied:

Bottles of 100, 1000 and 2000 tablets.

References:

- (1) Sands, R. X.: Trigonitis during Pregnancy: A Method of Treatment, New York St. J. Med. 61:2595-2602, 1961; (2) Haas, Jr., J., and Kay, L. L.: Management of Urinary Tract Infections, Southwest. Med. 42:30-32, 1961; (3) Renner, M. J., et al.: Urinary Tract Infections. Treatment with Antiseptic-Antispasmodic Agent, Hosp. Topics 39:71-73, 1961; (4) Marshall, W.: Treatment of Cystitis in General Practice, Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Treatment of Urinary Tract Infections in the Elderly, Clin. Med. 4:307-310, 1957.



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this is
PLEXONAL

(ACTUAL SIZE AND SHAPE)

* Optimum results are obtained by gradually increasing the dosage to the maximum the patient can tolerate without the appearance of drowsiness. The following procedure for dosage adjustment has proven highly successful: Take one tablet 2 times per day for 2 days. On the third day increase the daily dosage by one tablet. Similarly increase the dose every third day thereafter, to the point of drowsiness.

For example, if one tablet 4 times a day produces an obvious sleepy feeling, and on three the patient is comfortable, then the proper dose will be three tablets per day.

a superior daytime relaxing agent

(NOT A TRANQUILIZER)

PLEXONAL®

Comparative clinical studies show that PLEXONAL is superior to meprobamate or barbiturates for daytime relaxation^{1,2}

"Plexonal was preferred (superior therapeutic effect) by 73.7 per cent of the patients, whereas 11.1 per cent preferred meprobamate, a ratio of 6.6 to 1. . . . 30.5 per cent noted adverse reactions to meprobamate as compared to 7 per cent in respect to Plexonal. . . . Plexonal gave better results than did any of the sedative or relaxing agents that have been available during our experience covering the previous 15 years."¹

In 26 older age cardiac patients, "A comparison of Plexonal with the therapy previously employed showed that 17 did better on Plexonal than on meprobamate, 6 did better on meprobamate than on Plexonal and 3 responded the same to both."²

Indications: Anxiety, tension, apprehension, nervousness, irritability, restlessness, hyperexcitability.

Extremely well tolerated by geriatric patients who need mild sedation, as well as by depressed patients.

Dosage: One tablet 3 or 4 times a day is adequate for most patients. However, some require up to six tablets per day, whereas others respond adequately to as little as 1 tablet per day.*

Composition: Each tablet contains sodium diethylbarbiturate 45 mg., sodium phenylethylbarbiturate 15 mg., sodium isobutylallylbarbiturate 25 mg., scopolamine hydrobromide 0.08 mg., dihydroergotamine methanesulfonate 0.16 mg.

1. Scheifley, C. H.: Proc. Staff Meet. Mayo Clin. 34:408 (Aug. 19) 1959.
2. Davanloo, H.: Am. J. of Psychiat. 117:740 (Feb.) 1961.



NEWS AND NOTES—Continued

Dr. Winston K. Shorey

Dr. Winston K. Shorey, Associate Dean of the University of Miami School of Medicine has been named Dean of the School of Medicine at the University of Arkansas in Little Rock. The Doctor received his M.D. degree at the University of Pennsylvania in 1943.

Dr. George Baehr

Dr. George Baehr, Chairman of the New York State Public Health Council and founder of the Health Insurance Plan for Greater New York, was presented with the annual Biggs Memorial Award of the New York State Public Health Association for outstanding work in public health. Dr. Baehr has been a member of the New York State Public Health Council for more than 25 years, and its chairman since 1955. He has been a pioneer worker in the field of medical care and developed, at the request of Mayor LaGuardia, the Health Insurance Plan of New York City. Until 1950, Dr. Baehr was Chief of the First Medical Service and Director of Clinical Research at

Mount Sinai Hospital; also Clinical Professor of Medicine at Columbia University. Dr. Baehr was President of the New York Academy of Medicine from 1945 to 1948. He received his M.D. degree from Columbia University, and did postgraduate work at the Universities of Freiburg and of Vienna.

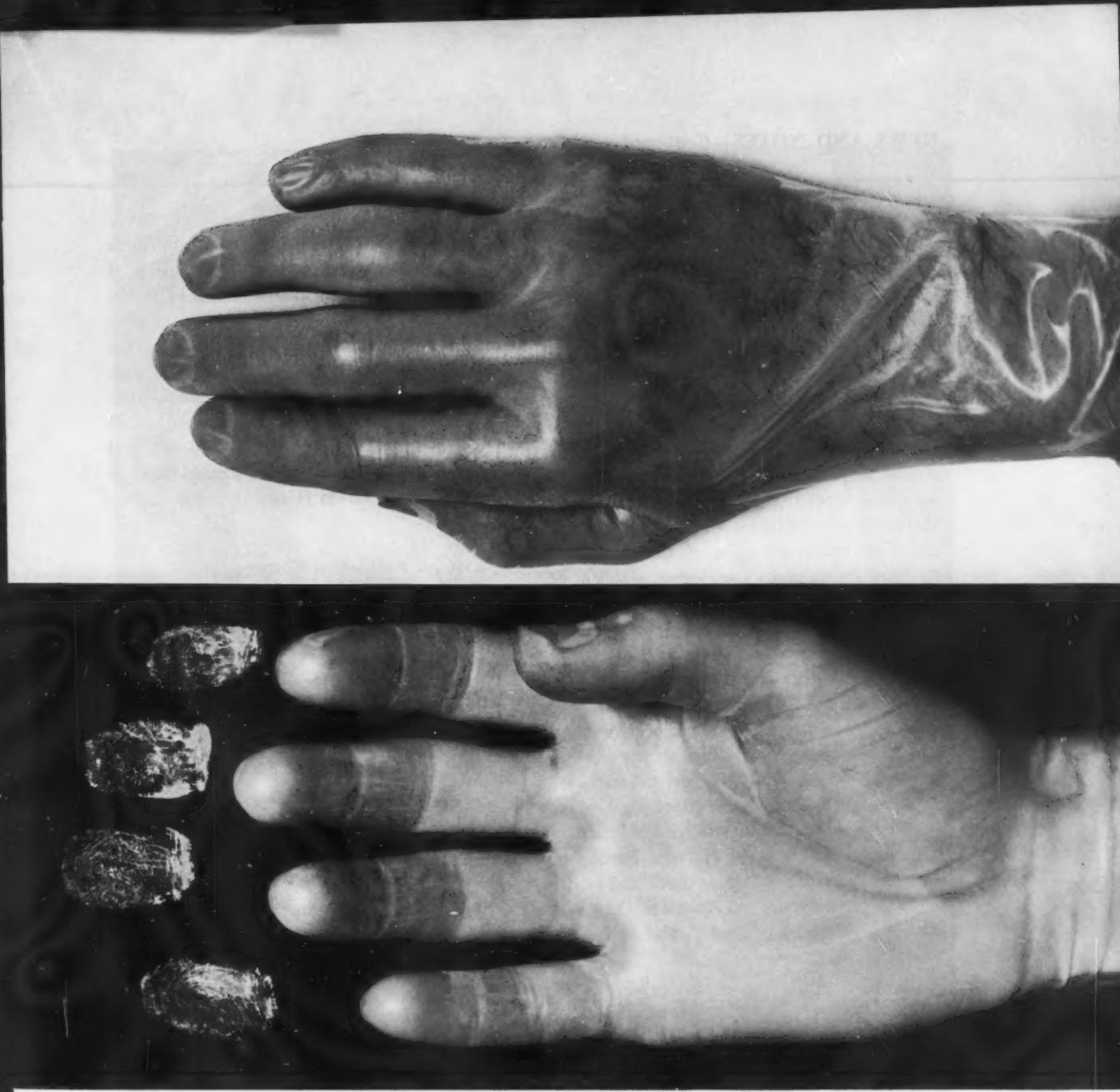
Rare Case Registry

The Southern Regional Education Board is maintaining a Rare Case Registry to help research investigators gain access to information about rare forms of mental retardation. The registry serves as a clearing house for information about the location and incidence of rare cases in this region, by putting those persons who request clinical data and material in touch with those who can supply it. This service is designed to aid qualified professional persons employed in academic or clinical facilities anywhere in the 15 Southern States. Personnel may be from any discipline or profession concerned with mental retardation.

Continued on page 230a



"Still bothered by that constipation, eh Mr. Kiel?"



Fingerprints through an examination glove?

Yes...it actually can be done! Such sensitivity is yours for the first time in the new **WILSON TRU-TOUCH*** Disposable Vinyl Examination Glove - the most sensitive finger-tips next to your own. Non-constricting ...seam-free construction. In a marketing study, more physicians preferred Tru-Touch to conventional examination gloves. A product of **BECTON, DICKINSON AND COMPANY, RUTHERFORD, N. J.**

Appointment to Walcott Chair at Harvard

Dr. John C. Snyder, Dean of the Faculty of Public Health at Harvard, has been appointed the first Henry Pickering Walcott Professor of Microbiology. The Walcott Professorship has been established to commemorate Dr. Henry Pickering Walcott (1935-1932), who was one of the early leaders in the field of public health in the United States, a former Fellow of the Harvard Corporation, and member of the Board of Overseers. Twice during the presidency of Charles W. Eliot, Dr. Walcott served as acting president of the University. In 1914, Dr. Walcott was elected president of the Harvard Alumni Association.

An endowed fund in the name of Dr. Henry Pickering Walcott was given to Harvard in 1922 by the Rockefeller Foundation to help establish the School of Public Health. Income from the unrestricted fund has been used to support various professorships in the School. A portion of the fund will now be restricted for the newly named professorship. Dr. Snyder, in addition to his administrative and teaching responsibilities, leads the Harvard portion of a trachoma research program conducted jointly by the University and the American Oil Company in laboratories in Saudi Arabia and at the School of Public Health.

Dr. Snyder received the M.D. degree from

Harvard in 1935. Prior to his appointment as Professor and Head of the Department of Microbiology at the Harvard School of Public Health, Dr. Snyder served as a staff member of the International Health Division of the Rockefeller Foundation from 1940 to 1946. Currently, the Doctor is a member of the Commission on Virus and Rickettsial Diseases of the Armed Forces Epidemiological Board, and a member of the expert advisory panel on virus diseases of the World Health Organization.

Goldblatt Pavilion at Chicago

Dedication exercises were held for the new \$1,480,000 diagnostic center of the University of Chicago to be known as the Goldblatt Pavilion. The first floor will consist of a waiting room and admissions office for outpatients. The second floor will house clinical laboratories, and chest and stomach x-ray micro-filming apparatus for routine disease detection. The top floor will consist of a new occupational therapy unit and a large sun terrace. The structure is designed to handle the outpatient visits to the University's medical facilities which average 175,000 annually.

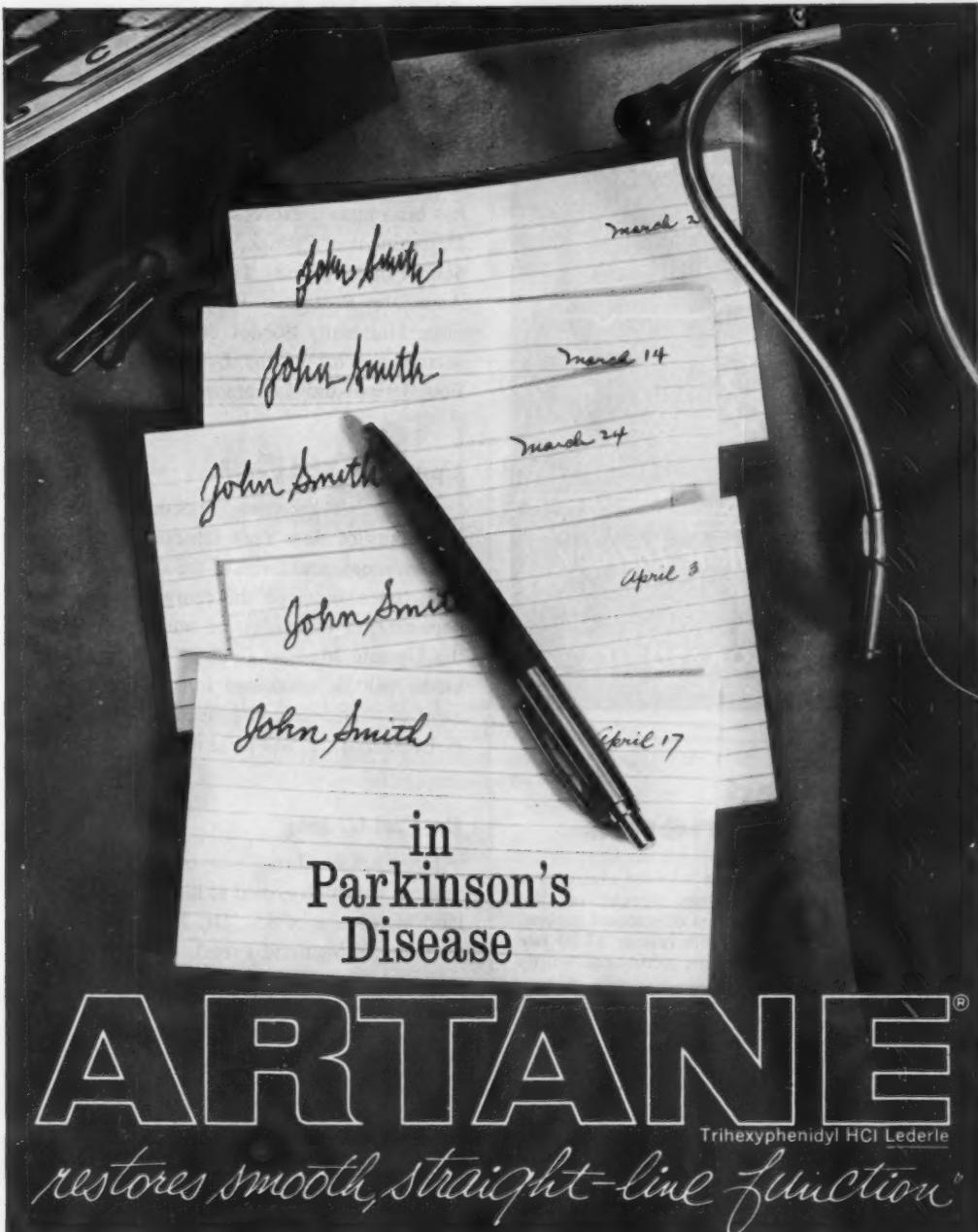
Hahnemann to Establish Cardiovascular Institute

The National Institutes of Health have granted Hahnemann Medical College and Hospital of Philadelphia \$2,000,000 to establish a clinical cardiovascular institute for a concentrated research effort into the causes, management, and correction of diseases of the heart and circulation. The program will be under the direction of Dr. William Likoff, Clinical Professor of Medicine and head of the cardiovascular section at Hahnemann. Facilities for the new institute will be housed currently in a specially renovated area of Hahnemann Hospital. Plans for a new building devoted to the institute are underway.

Concluded on page 232a



"I said her case history card.
This is a recipe for curried shrimp."



in
Parkinson's
Disease

ARTANE®
Trihexyphenidyl HCl Lederle
*restores smooth, straight-line function**

ARTANE is well suited to the needs of the greatest number of patients.² Improves rigidity, akinesia and mental depression. Controls oculogyria . . . remarkably free of toxic reactions.¹

Indicated: All types of Parkinsonism, and to control extra-pyramidal reactions in ataractic therapy. Supplied: Tablets, 2 mg. and 5 mg.; Elixir, 2 mg./5 cc. tsp. 1. Constable, K.: J. Am. M. Women's A. 15:757 (Aug.) 1960. 2. Critchley, M.: Brit. M. J. 2:1214 (Nov. 15) 1958.

Request complete information on indications, dosage, precautions and contraindications from your Lederle Representative or write to Medical Advisory Department.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

NEWS AND NOTES—Concluded

SULPHO-LAC

The Balanced Acne Therapy

MANUFACTURED BY
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NEW YORK 35, N.Y.

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FOR SALE OR LEASE

A beautiful home and office space in Indiana for M.D. in connection with dental office. Located on main highway in industrial and agricultural district. A growing community badly in need of medical care. The dental office has been established for past twenty years and going full time now, seeing twenty to twenty-five patients daily. This home will make ideal medical and dental clinic. The medical office covers downstairs floor space with plenty of room, has rest room, patio, garage and a nice yard with shrubbery. There is a four-room and bath apartment upstairs, all in nice condition. This place must be seen to be appreciated. Will sell on contract or rent reasonable. Send replies to Box 1101, Medical Times, 1447 Northern Boulevard, Manhasset, New York.

Dr. Floyd R. Skelton

Dr. Floyd R. Skelton, winner of the 1960 Parke-Davis Award in Experimental Pathology, has been named Professor and Chairman of the Department of Pathology, University of Buffalo School of Medicine. The Doctor was formerly Associate Professor Pathology at Louisiana State University School of Medicine, and research director of the Urban Maes Research Foundation and Laboratory.

Upstate Medical Center

Dr. Carlyle Jacobsen, President of the State University of New York Upstate Medical Center, Syracuse, and Dean of the College of Medicine, has announced the reorganization of the departments of obstetrics and gynecology at the Upstate Medical Center. The two departments will be combined into a single department of obstetrics and gynecology. Dr. Robert E. L. Nesbitt, Jr. will head the new department.

Dr. Carl G. Jung

Dr. Carl G. Jung, one of the founders of modern psychiatry, died at his home in Switzerland at the age of 85. Dr. Jung was an early associate of Sigmund Freud. He was primarily a neurologist who worked in the field of psychiatry, refining many of its basic concepts. The Doctor studied medicine at Basel and at Paris, later joining a mental clinic of which he became head in 1905.

Psychiatry Program at Georgetown

The Georgetown University Medical School under a grant from the National Institute of Mental Health will have a three-year residency program in psychiatry available for a qualified physician who is currently in general practice or in some specialty other than psychiatry. To be eligible, a physician must be a graduate of an approved medical school, and must have practiced four years following internship.

anorectal comfort...that lasts

Patients want full, fast and lasting relief from the distressing symptoms of common anorectal disorders, such as hemorrhoids, proctitis and pruritus ani.

*to maintain lasting
anorectal comfort
continue therapy with*

anusol®

*hemorrhoidal suppositories
or unguent*

to prevent recurrence of symptoms, one Anusol Suppository morning and evening and after each evacuation. Supplement with Anusol Unguent as required.

Neither Anusol nor Anusol-HC contains anesthetic drugs which might mask the symptoms of serious rectal pathology.

*to provide immediate
anorectal comfort
start therapy with*

anusol-HC®

*hemorrhoidal suppositories with
hydrocortisone acetate, 10 mg.*

to reduce inflammatory reaction and to provide immediate relief of anorectal pain and itching, two Anusol-HC Suppositories daily for 3 to 6 days.

MADE OF TEGAL GELUBIL PROLID PENTRATE MANDELAMINE

MS13



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RAIN OR SHINE

THE DOCTOR WILL ENJOY THIS UNIQUE

Barometer Desk Set

This decorative set makes an interesting conversation piece for the physician's office or den. Ideal as a gift or prize.

Made exclusively for us by European craftsmen, the set reflects quality workmanship in every detail. The whimsical figure of a physician is handcarved and painted, and the brass-finished barometer — made in West Germany — is a precision instrument that is fully guaranteed. Base and mounting are of genuine European walnut.

Size: 7" high, 7" long.

Price: \$19.95 each. Free delivery anywhere in the United States. Write for special prices on quantity orders.

MEDICAL TIMES OVERSEAS, INC.

1447 NORTHERN BOULEVARD
MANHASSET, NEW YORK

WHAT'S YOUR VERDICT?

(Answer from page 58a)

The Court of Appeals affirmed the judgment of the trial court, holding: "Shall we, a court of lawyers, lay upon the medical profession an inflexible injunction to be accessible at every moment for a given period of time following the performance of surgery, and never to leave the side of a patient in shock or critical condition? Or is this sort of question essentially for the jury? The answer is not free of doubt, in such a case the traditions of our juridical system, tested and approved by settled public acceptance, impel us to say that the surgeon was entitled to have the matter resolved by a jury of his peers."

BASED ON DECISION OF
COURT OF APPEALS OF KENTUCKY

WHO IS THIS DOCTOR?

(Answer from page 76a)

ALBRECHT VON HALLER

MEDIQUIZ

(Answers from page 93a)

1 (C), 2 (A), 3 (B), 4 (C), 5 (E), 6 (D),
7 (E), 8 (E), 9 (D), 10 (C), 11 (B),
12 (D), 13 (C), 14 (D), 15 (A), 16 (E).

MEDICAL TEASERS

Answer to puzzle on page 69a

CLINIC	MITRAL
TRICORN	EDEITIS
RA	ERIE
ANC	ASM
NIUH	HILLS
CURES	ALL
EMBROIL	ROSIN
RN	ADIPPOSE
NASCENT	UN
IDEAS	NODULAR
ARAB	ANA
CEL	SPACE
IN	SCARS
NATURAL	SPOT
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NeoDecadron®

DEXAMETHASONE 21-PHOSPHATE—NEOMYCIN SULFATE OPTHALMIC OINTMENT



keeps the
steroid
in the eye
because
it melts
in the eye

NeoDECADRON
OPHTHALMIC OINTMENT
melts at 97.8° F.

Hydrocortisone
OPHTHALMIC OINTMENT
melts at 107.3° F.

FOR:

GREATER EFFECTIVENESS—NeoDECADRON Ophthalmic Ointment melts at body temperature . . . providing optimal coverage of optimal concentration at the site of the lesion—it does not "pop out" on the lid.

ACTIVITY—dexamethasone 21-phosphate for unexcelled topical activity and solubility plus neomycin sulfate for broad antibiotic protection.

CONVENIENCE—in addition to NeoDECADRON Ophthalmic Ointment, NeoDECADRON® Ophthalmic Solution is available—a dosage form for every need.

INDICATIONS: Trauma—mechanical, chemical or thermal; inflammation of the conjunctiva, cornea, or uveal tract involving the anterior segment; allergy; blepharitis.

PRECAUTION: Steroid therapy should never be employed in the presence of tuberculosis or herpes simplex.

Before prescribing or administering NeoDECADRON Ophthalmic Ointment or Solution, the physician should consult the detailed information on use accompanying the package or available on request.

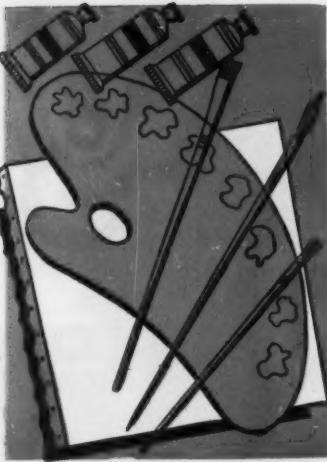
DOSAGE: Ophthalmic Ointment: Instill three or four times daily. Ophthalmic Solution: One drop four to six times daily. Dosage may be adjusted up or down, depending upon the severity of the disorder.

SUPPLIED: The ointment is supplied in 3.5 Gm. ($\frac{1}{8}$ oz.) tubes. Each Gm. contains 0.5 mg. of dexamethasone 21-phosphate as the disodium salt and 5 mg. of neomycin sulfate (equivalent to 3.5 mg. neomycin base). Also contains white petrolatum and liquid petrolatum. The solution is supplied in 2.5 cc. and 5 cc. sterile bottles with dropper assembly. Each cc. contains 1 mg. dexamethasone 21-phosphate as the disodium salt, 5 mg. neomycin sulfate (equivalent to 3.5 mg. neomycin base). Inactive ingredients: creatinine, sodium citrate, sodium borate, polysorbate 80, sodium hydroxide (to adjust pH) and water for injection. 0.32% sodium bisulfite and 0.02% benzalkonium chloride added as preservatives.

NeoDECADRON is a trademark of Merck & Co., Inc.



MERCK SHARP & DOHME Division of Merck & Co., INC., West Point, Pa.



Covering the Times

Like a woman's work, a physician's learning never ends. This may also be said of other professions but nowhere with as much reason. The discoveries of countless new drugs, new equipment and new techniques—all directed at saving and prolonging life and relieving human suffering—all are products of the learning process—and all require new learning on the part of the physician.

Today's physician learns by numerous ways: by his day-to-day experiences in the care of his patients, which help sharpen his insight in uncovering hidden illnesses; by reading; by attending ward rounds and conferences with his medical colleagues where combined experiences and knowledge are brought to bear on difficult medical problems.

Paradoxically, one of the more important learning methods for physicians is *teaching*, for by teaching he must not only refresh his own memory but keep up to date. Our cover artist, Alex Ross, has captured Dr. Marvin Chernow, Assistant Director of Laboratories, in just such a paradox: learning by teaching a class in pathology at the Norwalk Hospital School of Nursing (Conn.). The physician's role as a teacher, as a matter of fact, is very much in evidence at Norwalk Hospital and is considered an important factor in meeting high standards of care for patients.

From 50 to 100 practicing physicians in all specialties comprise the teaching faculty at Norwalk Hospital. In addition to providing an

accredited graduate educational program for interns and residents, the faculty, under the supervision of the Director of Medical Education, provides instruction in special medical areas for student nurses.

The hospital's educational program is affiliated with the Regional Hospital Plan of New York University-Bellevue Medical Center and is associated with the faculty of Yale University School of Medicine. A number of the Attending Physicians who participate in the hospital program also maintain teaching affiliations with nearby university medical schools.

The Director of Laboratories, Dr. Roy N. Barnett, and Dr. Chernow, besides conducting formal clinical pathological conferences regularly for the Attending and House Staffs, also plan and direct the hospital's accredited School of Medical Technologists. Here student technicians are taught all phases of clinical laboratory techniques—while Drs. Barnett and Chernow keep abreast of latest advances.

But the practicing physician at Norwalk Hospital is not the only one who learns by teaching. Residents of specialty services and interns are also encouraged to serve as discussion leaders during the presentation of problem cases before an audience of Attending Physicians as well as House Staff officers.

It is precisely this give and take of knowledge that makes the physician's role as teacher indispensable to his duty as a never graduated learner.

TRICHOMONADS EXPLODE



1. VAGISEC liquid and jelly penetrate and dissolve vaginal mucus, exposing even deeply embedded trichomonads.

2. VAGISEC's three active ingredients* permeate the cell's membrane, remove waxes and lipids, denature proteins.

3. Water is forced through the weakened cell wall, causing trichomonad to swell and explode. All within 15 seconds of contact.

Specific therapy for vaginal trichomoniasis

VAGISEC® liquid and jelly. "Many other chemicals stop motion and we have assumed that the organisms are dead, but with [VAGISEC] there can be no doubt, since only fragments remain."¹

The first office treatment with VAGISEC brings immediate symptomatic relief. With the very first office treatment, Decker² achieved immediate relief of acute symptoms in all 64 cases of acute trichomoniasis studied.

Cure rates as high as 96% with VAGISEC confirmed by negative cultures for three consecutive months. Roberts and Sullivan³ successfully treated 96% (48 of 50) vaginal trichomoniasis patients with VAGISEC, all of whom remained flagellate free, as proved by repeated negative cultures for three months after treatment. Giorlando and Brandt,⁴ and Weiner⁵ were equally successful with VAGISEC, curing 93.1% (54 patients of 58), and 90.2% (46 patients of 51) respectively, by means of the VAGISEC technique.

To prevent re-infection—RAMSES® for the husband. As Romney⁶ points out, "... therapy which is directed solely towards the female patient is unrealistic and ineffectual." Husbands readily cooperate when you prescribe RAMSES, the prophylactic with "built-in" sensitivity.

References: 1. Davis, C. H.: West. J. Surg. 63:53 (Feb.) 1955. 2. Decker, A.: New York J. Med. 57:2237 (July 1) 1957. 3. Roberts, C. L., and Sullivan, J. J.: West. Med. J.:12 (Apr.) 1960. 4. Giorlando, S. W., and Brandt, M. L.: Am. J. Obst. & Gynec. 76:666 (Sept.) 1958. 5. Weiner, H. H.: Clin. Med. 5:25 (Jan.) 1958. 6. Romney, S. L.: M. Sc. 8:235 (Aug. 25) 1960.

VAGISEC and RAMSES are registered trade-marks of Julius Schmid, Inc.

VAGISEC® liquid and jelly

*Active ingredients in VAGISEC liquid: Polyoxyethylene nonyl phenol, sodium ethylene diamine tetra-acetate, sodium diocetyl sulfosuccinate. In addition, VAGISEC jelly contains alcohol 5% by weight.

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1. Robertson, E. G.: *Postgrad. Med.* 25:31, Jan., 1959.

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References: 1. Finkel, M. J.: M. Times 86:1391, 1958. 2. Doshay, L. J., and Boshes, L.: Postgrad. Med. 27:602, 1960. 3. A. M. A. Council on Drugs: New and Nonofficial Drugs 1960, Philadelphia, J. B. Lippincott Company, 1960, p. 264. COGENTIN is a trademark of Merck & Co., Inc.



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